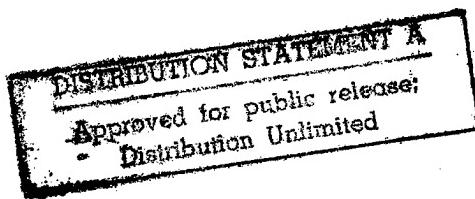


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# USSR Report

## MILITARY AFFAIRS

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21 June 1985

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MILITARY AFFAIRS**

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WARSAW PACT

ADMIRAL SOROKIN ON SIGNIFICANCE OF WARSAW PACT

LD131556 Moscow Domestic Service in Russian 0910 GMT 13 May 85

[Text] We present the broadcast "The Warsaw Pact is 30 Years Old." At our microphone is Admiral Aleksey Ivanovich Sorokin, first deputy head of the Main Political Directorate of the Soviet Army and Navy:

[Begin Sorokin recording] The whole of progressive mankind recently solemnly marked the 40th anniversary of the rout of fascist Germany. Our victory in the Great Patriotic War demonstrated with fresh force the advantage and invincibility of socialism. But as is evident, not everyone drew the proper conclusions from the lessons of the past war. Ten years after the great victory, the socialist countries were faced with the necessity to adopt collective measures to guarantee their security. On 14 May 1955, the Treaty of Friendship, Cooperation and Mutual Aid between the European socialist states, which has gone down in history as the Warsaw Pact, was signed in the capital of People's Poland. This military-political defensive alliance has been in effect for 30 years. It was created as a countermeasure to the threat to the security of the countries of socialism from the aggressive NATO bloc, formed under the aegis of the United States of America. Throughout the 3 decades, the Warsaw Pact, as was stressed at the meeting of top party and state figures in Warsaw on 26 April of this year, has reliably served the development and strengthening of comprehensive cooperation between the member-states, the guaranteeing of their sovereignty, security and inviolability of their frontiers, and the joint drafting and implementation of a peaceloving foreign policy course.

The history of mankind has known quite a few military-political alliances between states. They have had various aims and various fates. But among them there has never been one which has played such an outstanding role in the cause of preservation of peace as the Warsaw Pact. History has known no other such alliance in which relations are based on full equality and comradely mutual aid between sovereign states. The Warsaw Pact is, in the full sense of the word, an alliance of free, peaceloving peoples. It has threatened and threatens nobody. The fraternal socialist states have never been supporters of the division of Europe and the world into military blocs opposing each other. The creation of their defensive organization by the socialist countries was brought about by circumstances. From the beginning of the fifties, the imperialists, and first and foremost reactionary circles in the USA, openly began preparations for world nuclear war. They stepped up the arms race and

created the aggressive North Atlantic bloc and other military alliances. They embarked on the restoration of the FRG's military might, and began to threaten the USSR and other countries of socialism with war. True to its Leninist peace-loving foreign policy, the Soviet Union put forward the initiative of convening a conference of all European states and the U.S. to discuss measures necessary to prevent the rebirth of German militarism. However, the Western countries refused to take part in such a conference. They rejected the proposal of the socialist states to create a unified system of collective security in Europe. In these circumstances, the European socialist countries were forced to adopt their own defensive measures. In concluding the Warsaw Pact, the Soviet Union and the other socialist countries were guided by Lenin's ideas about the defense of revolutionary gains. Peoples which have taken the path of socialist development, Vladimir Ilyich Lenin indicated, absolutely must have a close military and economic alliance, for otherwise, the capitalists will crush and suffocate us one by one.

The 26th CPSU Congress gave a high evaluation to the role played by the Warsaw Pact Organization and the Political Consultative Committee, its supreme body, in the cause of defending the gains of socialism and preserving and consolidating international security. It is thanks to the harmonized actions of the Warsaw Pact member-countries that the road to the European conference in Helsinki was opened up. In subsequent years, at its conferences in Bucharest and Moscow, Warsaw and Prague, the Political Consultative Committee has put forward a number of new initiatives. At their foundation lies the aspiration of the Warsaw Pact member-states to preserve and consolidate universal peace and security, and to continue the process of relaxation of tension. Connected with the Warsaw Pact are major initiatives aimed at consolidating security and at disarmament, primarily in Europe. The recent meeting in the capital of People's Poland again demonstrated the firm resolve of the Allied states to continue to follow unswervingly the Leninist course of peace and peaceful co-existence. The fraternal socialist states have repeatedly proposed the simultaneous dissolution of the Warsaw Pact and NATO, and that of their military organizations as a first step. This stand was reaffirmed once again at the meeting in Poland in April of this year. At the same time, it was firmly stated in Warsaw that as long as the NATO bloc exists and the threat to European and universal peace is preserved, the socialist states will strengthen their defensive alliance, stepping up their struggle for disarmament and peace, and for the surmounting of military blocs simultaneously. The unanimous decision to extend the term of the Warsaw Pact for the next 20 years, with a subsequent prolongation of another 10 years, was dictated by the need to ensure reliable security of the fraternal allied states and to maintain their defense capability at the proper level. And this act has been a significant milestone on the path of further strengthening of the unity and cohesion of the states of the socialist community.

The Warsaw Pact organization has become significantly stronger in recent years. The Soviet Union, with immense economic and defensive might at its disposal, and rendering comprehensive aid to the fraternal countries in enhancing their defense capability and improving the armed forces, makes a decisive contribution to the cause of defending world socialism. The Warsaw Pact provides the opportunity to make use of all the advantages stemming from the uniform character of

the political and economic systems of the socialist countries, and creates the necessary preconditions for the unification of their military potentials and for the strengthening of the might of the world system of socialism.

In their relations, the countries of the Warsaw Pact are steadfastly guided by the principles of class solidarity, combat cooperation, close cohesion and unity of action, sovereignty and equality of the socialist states and their armies, and unity of the national and the international in defense of the gains of socialism. The life-giving source of the steadfastly developing and strengthening unity of the fraternal countries is the day-by-day leadership of the communist and workers' parties. The principles of the cooperation of the socialist states and of the combat cooperation of their armed forces have sound economic, socio-political, ideological and military-strategic foundations. The allied armies have become stronger and been further developed as a result of joint efforts by the fraternal peoples and governments of the Warsaw Pact member-countries. Today they have excellent organization and modern weapons and equipment. The allied armies are capable of resolving the most complex tasks, and are vigilantly protecting the peaceful labor of the peoples of the socialist community.

The coordination of efforts of the fraternal countries in issues of strengthening defense, and the systematic exchange of experience in building and developing national armies, operational and tactical training of troops and enhancement of their combat readiness, are most important directions in the strengthening of combat cooperation of the joint armed forces. It is a feature of the exchange of experience between the allied armies that it embraces all sectors and mechanisms of the joint armed forces. The broad and creative assimilation of the experience of fraternal armies in military construction and troop training makes the success of each the property of all, and serves to strengthen the military alliance.

An exceptionally great role in the development of military cooperation between the Warsaw treaty member countries is allocated to joint headquarters, special exercises and games. Joint exercises are a true school of friendship and combat comradeship of the soldiers of the fraternal armies, and a clear demonstration of the progressing process of a comprehensive drawing together of the armies of the socialist states in the enhancement of combat might. During the exercises, political work is carried out among the soldiers and the local population. Aimed at strengthening the friendship between the peoples of the fraternal countries, at instilling love of the working masses for the soldiers of the socialist armies, and at strengthening ties between the armies and the peoples building socialism and communism.

Contacts between the political bodies of the allied armed forces are a most important means for the further strengthening of cooperation of the socialist armies and of friendship between servicemen, and for unifying them in a unified family. A fruitful exchange of experience in combat training of troops, political education of the personnel, organization of socialist competition and other forms of training and education of the soldiers of the fraternal armies is implemented. The exchange of visits by delegations of political workers from the fraternal countries is practiced. Festivals of military films are

organized regularly, and there are exchanges of army and navy ensembles and photographic exhibitions. Soviet military delegations are invited to the celebration of anniversaries of the liberation of countries and individual towns from the German-Fascist invaders. The cooperation between political bodies of the armies of the Warsaw Pact countries, and the richness of joint forms of internationalist education of the personnel, have today become an organic part of the overall complex of relations between the armed forces of the fraternal socialist countries.

The forms of ties between the navies of the socialist states are being improved. In recent years, Soviet naval vessels have been on friendly visits to Poland, Bulgaria, Romania, the GDR, Hungary and Czechoslovakia. Polish, Romanian and Bulgarian sailors and sailors from the GDR people's Navy have been on friendship visits to the Soviet Union. Such visits are as a rule accompanied by the staging of a large quantity of mass political measures.

Close combat cooperation has been established between soldiers of the groups of Soviet troops temporarily stationed on the territory of the GDR, Hungary, Poland and Czechoslovakia and the armies of these countries. The soldiers of the groups of Soviet troops are sacredly fulfilling their internationalist duty.

The developing process of the drawing together of the fraternal armies enriches them with improved methods of enhancing combat readiness, with each other's experience, and increases the significance of the Warsaw Pact organization. The 30th anniversary of the Warsaw Pact coincides with the 40th anniversary of the Soviet people's victory in the Great Patriotic War. In the Warsaw Pact is the heritage of the victory, the continuation of the traditions of our brotherhood-in-arms.

The world is today troubled. The forces of imperialism, and first and foremost the ruling circles of the U.S. continue to act as pioneers of the arms race. The danger of a nuclear conflict increases many times over as a result of Washington's plans to bring about the militarization of space. At the April Plenum of the CPSU Central Committee, Mikhail Sergeyevich Gorbachev, general secretary of the CPSU Central Committee, stressed that the achievement of military-strategic equilibrium with the states of the aggressive NATO bloc is an exceptionally important, historic accomplishments of the socialist countries, and that this parity must be preserved by every means for the sake of peace. It reliably restrains the aggressive appetites of imperialism. The armies of the socialist countries have been marching shoulder to shoulder for 30 years in the monolithic order of the armed forces of brother peoples united in the Warsaw Pact. Their unity and internationalist cohesion is unbreakable. The soldiers of the armies of the countries of the socialist community are profoundly aware that they are defending the most just state structure, and the peace and happiness of the working people. The consciousness of this great aim inspires them to the successful resolution of the tasks facing them. They are ever ready to give any aggressor a decisive rebuff. [end recording]

CSO: 1801/226

WARSAW PACT

BRIEFS

JOINT EXERCISE IN CZECHOSLOVAKIA--In the period from 25-31 May, 1985, the Central Group of Forces and the Czechoslovak People's Army plan to conduct joint exercises in the Czechoslovak Socialist Republic in the areas of Usti, Karlovy Vary, Rakovnik, Mlada-Boleslav and Liverec. The exercises will be conducted for the purpose of developing aspects of coordination between the different branches of service. Ground and air force units with a total strength of about 25,000 men will participate in the exercise. [Text] [Moscow PRAVDA in Russian 4 May 85 p 4] 12747

CSO: 1801/219

ARMED FORCES

GENERAL SHABANOV ARTICLE

PM161012 Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 8 May 85 p 1

[Article by Hero of Socialist Labor Army General V. Shabanov, USSR deputy defense minister for armaments: "The Great Victory"]

[Text] On 9 May it will be 40 years since the battle of unprecedented scale against imperialism's most reactionary strike force--Hitlerite fascism--ended.

History knows no other example of an entire people's feat and unprecedented cohesion to achieve victory over a terrible enemy.

The victory was won by the Soviet people and their armed forces under the leadership of the Communist Party.

The party was the inspirer and organizer of the nationwide struggle against the German fascist invaders.

The Soviet Union's victory in the Great Patriotic War was profoundly law-governed. It convincingly showed the great advantages of socialism over capitalism and the unprecedented vitality and invincibility of the world's first socialist state.

The Great Patriotic War clearly demonstrated the Soviet armed forces' superiority over the capitalist world's strongest and most experienced Hitlerite Army. The high standard and creativity of Soviet military science and military art and the qualities of the socialist system's military organization were revealed with full force during the war.

An invaluable contribution to the achievement of victory was made by working people behind the lines. The Soviet economy outperformed the economy of fascist Germany. With a smaller industrial base than Germany--which had at its disposal almost all the resources of Europe--the Soviet Union produced almost twice as many arms and combat hardware during the war, and better quality moreover.

Military production was rapidly launched on the basis of the successful development of heavy industry in our country: In 1943 aircraft production grew 38 percent, antiaircraft artillery production 65 percent, heavy machine-gun production 74 percent, and ammunition production 25 percent in comparison with 1942.

The successes in developing a well organized war economy made it possible in 1943 to accelerate the Soviet army's rearmament. During this period the proportion of new types in the total volume of deliveries reached 42.3 percent in infantry arms, 83 percent in artillery, over 80 percent in armor, and 67 percent in aircraft.

The high point of Soviet military production was reached in 1944. Some 2,450,000 rifles and carbines, 122,400 artillery pieces, 29,000 tanks and self-propelled guns, and 33,200 warplanes were produced. The Soviet Union outperformed average German production by 200 percent in terms of field guns, 400 percent in terms of mortars, and 160 percent in terms of antitank weapons.

The imperialist strategists clearly underestimated the economic might of the land of the Soviets and the mobility and flexibility of its economic organization.

An enormous role in achieving victory over the enemy was played by the country's scientific forces. They were faced with the most difficult and responsible task--helping the party and the people to ensure the rapid transfer of our entire industry to a war footing, to bring all economic potential into play, and to use the entire might of the country's scientific forces to create and produce the latest weapons.

The war required not only the pooling of the efforts of scientists of many specialists but also the precise coordination of the actions of scientific institutions. A great role here was played by special commissions. They comprised major specialists in fields of knowledge and representatives of the Academy of Sciences. They had close ties with government institutes and industrial and people's defense committees. V. Komarov, president of the USSR Academy of Sciences, headed the commission for the mobilization of the resources of the Ukraine and Western Siberia and Academician Ye. Chudakov the commission concerned with the resources of the Volga and Kama regions. Geological and geographic backup was provided by a committee under the chairmanship of Academician A. Fersman. The military medical commission was headed by L. Orbeli, vice president of the USSR Academy of Sciences. Commissions were also organized for scientific, technical, and naval questions (Academician A. Ioffe, chairman) and for aviation questions (headed by Academician N. Bruyevich). This made it possible not only to conduct large-scale research linked with the economic development of entire regions of the country but to fulfill--which was no less important--the specific and purely practical targets of the party Central Committee and the State Defense Committee.

Some 199 rear services working people were given the title hero of socialist labor for their selfless work in creating and producing arms during the war years, more than 204,000 workers, kolkhoz members, and representatives of the intelligentsia were awarded orders and medals, and 16 million people were awarded the medal "For Valiant Labor in the 1941-1945 Great Patriotic War." All this clearly testifies to the unprecedented feat of the working class, the kolkhoz peasantry, and the labor intelligentsia. It was they who effected and translated into reality the fundamental advantages of the socialist national economic system, which made it possible to create the material basis for victory in the Great Patriotic War over fascist Germany.

Soviet people won their victory with their own weapons produced at soviet enterprises. A certain [izvestnyy] role in the equipping of our armed forces was also played by lend-lease shipments. However, these comprised only 4 percent (up to and including 1945) of the total volume of Soviet military production.

Reactionary forces strive to distort the nature, course, and results of the Great Patriotic War and to belittle the USSR's role in the rout of Hitlerite Germany. They strive to prove at all costs that the socialist country was not the decisive force in achieving victory over fascism. Western reactionary history, incapable of denying the fact of the rout of the main Wehrmacht forces on the Soviet-German front, try to present the defeat of fascist Germany as a happenstance conditioned by Hitler's miscalculations and mistakes. It is entirely obvious that recognition of the Soviet Union's decisive role in routing the fascist bloc would mean recognizing the invincibility of the socialist social and state system.

The lessons of the Great Patriotic War are of lasting importance. The main lesson is that it is necessary to struggle against war before it begins. The Soviet Union combines the struggle for detente, disarmament, and peaceful development with the strengthening of its defense might and the improvement of the armed forces' combat capability.

M.S. Gorbachev, general secretary of the CPSU Central Committee, stressed in his speech at the CPSU Central Committee March plenum: "In the complex international situation it is more important than ever to maintain our motherland's defense capability at such a level as to ensure that potential aggressors are well aware that infringements on the security of the land of the Soviets and its allies and on Soviet people's peaceful lives will be met with a crushing retaliatory strike. Our glorious armed forces will continue to have everything necessary for this."

Soviet Armed Forces servicemen are profoundly aware of their supreme responsibility for the tasks assigned to them and are successfully mastering the theory and practice of military matters. They have combat hardware and arms of the quality and in the quantities needed to resolve these tasks. However, the USSR armed forces' potential as socialist society's military organization is typified not only by a high standard of technical equipment. It is augmented many times over by the Soviet people's indissoluble sociopolitical unity, the personnel's high morale, their devotion to communist ideals, the people, and the Communist Party, their excellent combat skills, and their constant readiness to carry out their sacred duty of defending the socialist fatherland.

CSO: 1801/226

## ARTICLE BY CSSR'S VACLAVIK

PM081222 Moscow KRASNAYA ZVEZDA in Russian 5 May 85 Second Edition p 3

[Article by Colonel General M. Vaclavik, CSSR minister of national defense, under the rubric "On 40th Anniversary of Czechoslovakia's Liberation from Fascism": "In Indestructible Alliance"]

[Text] This year we celebrate the 40th anniversary of the time when the glorious Soviet Army freed our peoples and definitively routed the German fascist army. The Soviet Army's victorious offensive inspired Czechs and Slovaks to the struggle against Hitler's occupiers, which grew into the armed action of the people's masses--the Slovak national uprising and the Czech people's May uprising. The meaning of this historic breakthrough in our country's modern history was expressed by Comrade Gustav Husak, general secretary of the CPCZ Central Committee and president of the CSSR: "The peoples' memory will preserve forever the great and decisive events of their own history and of world history which are handed on from generation to generation as life-creating lessons. It is in the light of these events that the peoples and classes not only assess their past but also base their new plans and prospects of further development."

The date of 9 May 1945, when the successful Prague operation and the liberation of Prague completed the Soviet Army's liberation mission in Czechoslovakia, is such a great event in our people's destiny. The 6-year antifascist national liberation struggle of the Czechs and Slovaks ended victoriously with the defeat of Nazi Germany. A new era opened in the history of our peoples. The broad people's masses launched a national democratic revolution and ultimately established a socialist social system in Czechoslovakia.

The appeal of the CPCZ Central Committee, CSSR National Front Central Committee, and CSSR government on the 40th anniversary of the completion of the Czechoslovak people's national liberation struggle and the liberation of our motherland by the Soviet Army expresses the profound gratitude of the peoples of Czechoslovakia to the fraternal Soviet people and their armed forces for their liberation from fascist enslavement.

It is a historical fact that the Communist Party was the most active and leading force in the struggle for Czechoslovakia's national freedom and state independence. In a tireless, hard struggle against the occupiers, in uncompromising class antagonism with the Czechoslovak bourgeoisie, it proved that it was fully capable of resolving all the vitally important questions concerning our

peoples' existence and their future and Czechoslovak independence. The party, headed by that experienced revolutionary leader Klement Gottwald, advanced a program for the vigorous national liberation struggle of the Czechoslovak people, who relied primarily on the Soviet Union's support. It was the communists who united the people in the broad antifascist National Front. They proved their courage and patriotism, acting in the front ranks of the resistance.

The national democratic struggle of the Czechs and Slovaks was inextricably linked with the heroic Soviet people. We highly rate the fact that even in the tragic days of the Munich pact when the imperialists powers surrendered Czechoslovakia to Hitler to tear to pieces, it was the Soviet Union which selflessly offered us all-around aid to avert the aggression menacing us. Our people's vigorous liberation struggle during World War II put forward the Communists' consistently upheld demand for a new foreign policy orientation for the Czechoslovak state and its alliance and friendship with the fraternal Soviet Union. The Czechoslovak Communists' protracted efforts to resolve this fundamental task were successfully completed with the conclusion of the 12 December 1945 treaty on friendship, mutual aid, and postwar cooperation. Our peoples thus gained a firm basis for the restoration of freedom, postwar development, and the safeguarding of state sovereignty and security.

The alliance and friendship between the Soviet Union and Czechoslovakia relied not only on relations of Slav closeness and on the joint antifascist liberation aims of the two countries' peoples but also on the nascent traditions of combat friendship sanctified by the jointly shed blood of the Soviet and Czechoslovak servicemen, partisans, and other Resistance fighters. The servicemen of the Czechoslovak formation put together on USSR territory with the Soviet people's selfless aid courageously fought alongside the Soviet Army in the battles at Sokolovo, Kiev, and in particular the Carpathians and also on Czechoslovakia's territory. The unrivalled heroism of the Soviet servicemen who liberated our motherland will remain forever in our people's memory. It is with a feeling of profound gratitude and respect that we preserve the memory of the more than 140,000 sons and daughters of the Soviet people who gave their lives for our freedom.

Czechoslovakia's liberation by the Soviet Army opened up for the Czechs and Slovaks the way to the consistent revolutionary transformation of society. In terms of its historical significance, depth, and complexity, this task was unparalleled in all the years of our people's long preceding struggle for freedom and social progress. In the keen class struggle of the first postwar years the working class, under the CPCZ, achieved an orientation toward the building of a new, socially and nationally just system and in the unforgettable days of February 1948 completed the process of the national democratic revolution's development into a socialist revolution.

In a historically brief period a flourishing socialist society was built in Czechoslovakia. A new type of state was consolidated, giving working people the right to take a broad part in the affairs of society's management. The constantly developing economic potential became an inexhaustible source for improving the working people's living standard and strengthening the country's

defense capability. The Czechoslovak federation was created on the basis of Lenin's principles of nationalities policy. Firm foundations arose for the coexistence of Czechs, Slovaks, and other nationalities. We are rightly proud of our successes in developing education, science, and culture. The past 4 decades convincingly confirm that socialism has brought our people all-around material and spiritual development. We are now making every effort to fulfill the goals defined by the 16th CPCZ Congress and above all the tasks of the 7th 5-Year Plan. The results achieved are mainly satisfactory and create favorable preconditions for resolving new, more crucial tasks connected with the intensification of the national economy.

In indestructible alliance with the socialist community countries, the USSR's position in the international arena has been consolidated. Above all cooperation has been intensified and ties of friendship with the Soviet Union and its army have strengthened. We were persuaded of this anew during our military delegation's official friendly visit to the Soviet Union this March. We were given a wonderful reception and the servicemen of the Soviet Army and Soviet citizens displayed deep feelings of friendship for Czechoslovakia and its people.

Socialist Czechoslovakia's real successes also include the building of the Czechoslovak People's Army, an army of a new type. It was based on the participants in the antifascist Resistance movement, primarily the servicemen of the First Czechoslovak Army Corps, formed in the USSR. It is important that our new army was built on the model of the Soviet Army. Thanks to that fact the Leninist principles of military building were successfully introduced, combat readiness was reinforced, political awareness and combat skill improved, as did the readiness to ensure, together with the fraternal armies, the defense of socialism and peace. These results were achieved thanks to the all-around concern of our party for the army, the joint efforts of commanders, political organs, and party organizations, and the selfless aid of the Soviet Union and its army.

The 16th CPCZ Congress, proceeding from the objective need to defend socialism and its international nature, planned to continue to build the Czechoslovak People's army as an inalienable component of the Warsaw Pact states' armed forces. As is well known, at the 26 April meeting of the Warsaw Pact countries' top party and state figures a protocol was signed on extending the pact for the next 20 years with a subsequent prolongation for a further 10 years. Boundlessly devoted to the party and people, the Czechoslovak people's army together with the Soviet Army and the armies of the other fraternal countries is prepared to defend peace and the gains of socialism.

We have achieved positive results in fulfilling these tasks. Our army is a reliable class instrument of the state. Its socialist nature has been intensified still further, party influence on all spheres of the life and activity of troops and staffs has increased, and the quality of combat training and the readiness to defend the country and socialism have improved. The Czechoslovak people's army personnel are closely rallied around the CPCZ and its Central Committee. The unity of the army and people has been strengthened and the Czechoslovak people's army's contribution to the education of the younger

generation and the fulfillment of national economic tasks has increased. There has been an improvement in the standard of cooperation with the armies of the other Warsaw Pact states, above all with the Soviet army. We are proud that the Czechoslovak servicemen and the servicemen of the central group of soviet forces, with which our army is developing all-around contacts in combat and political training, creating relations of combat friendship, that these servicemen are standing side by side in defending the country's western border, which is also the western border of the socialist community.

The Czechoslovak people's army makes a considerable contribution to the collective defense of the socialist community countries. Our army is a firm link in the Warsaw Pact and is prepared honorably to fulfill its patriotic and international duty. The personnel approach the fulfillment of projected tasks in a spirit of high responsibility. In honor of the 40th anniversary of the completion of the Czechoslovak people's national liberation struggle and the liberation of our motherland by the Soviet army and the 30th anniversary of the Warsaw Pact, we are increasingly developing our activity and initiative aimed at raising combat readiness. By their aware approach, specific military work, and the results they have achieved, the personnel are confirming their devotion to the CPCZ and to our allies and their readiness, in fraternal alliance with the armies of all Warsaw Pact states to defend the gains of socialism.

We are obliged to raise our vigilance and readiness by the dangerous development of the international situation and the aggressive intrigues of the most reactionary imperialist and militarist forces, especially those of the United States. Seeking military-strategic superiority over the Soviet Union, the United States considers the threat of force and even the use of force to be a means of achieving its political ends. The mounting arms race, which the United States is seeking to move into space, also accords with this strategy. The situation has been considerably exacerbated in connection with the deployment of new U.S. first-strike missiles in the NATO countries. Above all in the FRG, with which Czechoslovakia has a joint border and where the economy is being rapidly militarized, military preparations are being made, fabrications about the results of World War II are being disseminated, and the rampaging of revanchism is to be observed. However, all postwar development convincingly proves that the Soviet Union's defense might is the main obstacle in implementing imperialism's aggressive plans. Socialist Czechoslovakia actively supports the Soviet peace initiatives aimed at normalizing international relations. We assess highly the USSR's decisive role in ensuring the defense capability of the entire socialist community in the interests of preserving peace.

In celebrating the 40th anniversary of the completion of the Czechoslovak people's national liberation struggle and our motherland's liberation by the Soviet Army, we realize increasingly that the Soviet Army bore on its shoulders the brunt of the fighting against fascism. We mentally turn again to the fact that Czechoslovakia's liberation by the Soviet Army helped to create the main prerequisites for our peoples' happy and joyous life, that it is above all alliance and cooperation with the Soviet Union and the brotherhood in arms between the Czechoslovak People's Army and the Soviet Army which are the guarantee of security and the further successful development of socialism in the CSSR. All this has been enshrined in the treaty on friendship, cooperation, and mutual aid between the USSR and the CSSR, the 15th anniversary of

whose signing falls on 6 May. In the spirit of this treaty, which embodies the great principles of socialist internationalism, we consider it our international duty constantly to develop and strengthen the ties of indestructible friendship and all-around cooperation between the peoples and armies of the Soviet Union and the CSSR.

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ARMED FORCES

GDR'S HOFFMANN ON ANNIVERSARY

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[Article by Army General H. Hoffmann, member of the SED Central Committee Politburo and GDR Minister of National Defense, under the rubric "Marking the 40th Anniversary of the German People's Liberation from Fascism": "With the Soviet Union Forever"]

[Text] What Ernst Thaelmann had predicted back in June 1941 was confirmed in May 1945: The Soviet Union would break Hitler's neck. In a very brutal war, which claimed the largest number of casualties of all wars in human history, the workers and peasants of the world's first socialist country vanquished fascist Germany's system of imperialist despotism. The scientific world outlook of the working class and its party triumphed over the racist ideology of the German capitalists and the Nazi Party.

The SED Central Committee, GDR Council of Ministers, and National Front appeal "On the 40th Anniversary of the Victory over Hitlerite Fascism and the German People's Liberation" states: "That victory was the second-most important liberation exploit in world history to be accomplished by the Soviet people, after the Great October Socialist Revolution. Their victory saved world civilization from fascist barbarity. It also brought the German people liberation from the yoke of Nazi dominion. It opened the way to the formation of the GDR. It proved the basis for four peaceful decades in Europe."

For the people of the GDR and its armed defenders the 40th anniversary of the Soviet Union's victory over Hitlerite fascism and the German people's liberation from Nazi dominion is a great solemn and festive day. On 8 May 1945 our people were liberated from fascist tyranny and racial blindness, from the theory and practice of "master race supremacy" and the great German mania for world supremacy. The day of 8 May 1945 provided a great historic chance for a new beginning, for a fundamental shift in German history: to live as a free people in a democratic, peace-loving state and to win the trust and respect of their neighbors.

This is why diverse preparations for the 40th anniversary of the liberation have been continuing for many months in all spheres of our society and, naturally, in the National People's Army. Whether it is a question of additional output in the national economy, or of further increases in combat capability and combat readiness in the army and the border troops, or of the modest

gifts which are being prepared in schools and kindergartens for our Soviet friends, or of the sprucing up of memorial sites and monuments to the Soviet fighters who fell on GDR soil--all this shows that a new attitude to the Soviet Union has taken shape in all our people over the course of 40 years.

These preparations have culminated in ceremonial meetings in all our country's party and youth organizations, as well as in other major measures in April and May 1985. They are all devoted to the heroic achievements of the Soviet people and their glorious army in the Great Patriotic War.

At the Soviet memorials in Berlin's Treptow Park, in Dresden, and on the Seelow heights our citizens bow their heads in memory of the 20 million people of the Soviet country who perished heroically in battle or who were killed by the fascists. Our citizens express their joy with their new peaceful life and their friendship and close alliance with the country and army of Lenin. They display their determination never to allow war to break out from German soil against socialism and the Soviet country. And they proclaim their unbending will to cherish the class and military alliance with the Soviet Union as the apple of their eye. With the Soviet Union forever, and never any other way: for the GDR people and their soldiers this is the chief lesson of World War II and the most important behest of Liberation Day--8 May 1945.

Being on the side of the victors in the Great Patriotic War, our people have themselves now become a victory--a victor in overcoming a disastrous chapter in their past, a victor in the unified revolutionary process of antifascist-democratic and socialist transformations. Under the leadership of a Marxist-Leninist party and in fulfillment of the Yalta and Potsdam agreements among the states of the anti-Hitler coalition, imperialism and militarism were eradicated in the eastern part of Germany and truly democratic power and social order were established. War criminals were punished.

This happened in a fierce struggle against reactionary elements inside the country and imperialist forces abroad. The NATO states under U.S. leadership and the forces of German imperialism and militarism which had risen up again in the western zones and later in the FRG wanted to change the results of World War II and, above all, to swallow up the GDR. During those years the assistance of the Soviet Union, whose own serious wounds were still bleeding, and, in particular, the presence of the Group of Soviet Forces in Germany were of decisive significance for ensuring that the revolutionary transformations in the GDR could be completed without a civil war, and the danger of military intervention by the Western powers was ruled out right from the start.

The assistance of our Soviet comrades in creating and developing our own defense and its nucleus--the National People's Army--is of inestimable significance for us. Take just one important sphere, such as cadre training: Almost 3,000 officers of the National People's Army graduated from Soviet military academies, and 253 generals and officers graduated from the K.Ye. Voroshilov Military Academy of the USSR Armed Forces General Staff.

The National People's Army quickly grew and strengthened thanks to close co-operation with the Soviet Army. Within the framework of the socialist defense coalition it learned to fulfill complex tasks. This was manifested on many staff and troop exercises.

Cooperation with the Soviet Army and, above all, with the Group of Soviet Forces in Germany, the "regiment in neighborhood," as our soldiers' song puts it, is of inestimable significance for the internationalist training of our army's servicemen. Indeed, today all units of the National People's Army and the GDR border troops have constant relations of brotherhood in arms with one or several Soviet partner units.

One motorized rifle regiment in our armed forces conducts almost 80 political and combat training exercises jointly with a Soviet partner unit in the course of the training year. To this are added 20-25 joint sports and cultural events. There are regular methods conferences for company and battery commanders, exchanges of experience between commanders, political officers, or chiefs of staffs of both regiments, competitions on the training field, exchanges of views and teams, the use of mixed crews and teams, joint field camps, military and sports competitions, exchanges of lecturers, and joint cultural excursions. In addition, many thousands of representatives of the public visit the regiment during combat cooperation week between 23 February and 1 March.

Understanding of the Soviet Army's liberation role in World War II, unity on fundamental issues of our parties' and states' policies, conviction as to the need to struggle together for the common cause, and also numerous personal ties--all this deepens the sense of joint responsibility and increases confidence in one another. Whether it is a question of providing modern weapons and hardware or passing on the latest knowledge or of leading cadres' qualifications--servicemen of the National People's Army always feel everywhere the friendly advice and hand of their Soviet comrades.

The generals, officers, ensigns, sergeants, and soldiers of the Soviet Army with whom we cooperate today are continuing with honor the great cause of those who liberated our people, who ensured the armed defense of worker-peasant power during the first years, and who helped our young commanders and political workers as advisers.

And if we, people of the older generation, recall the first postwar years, it is with gratitude not only for the first weapons and hardware which we received from our Soviet friends but also for the understanding and comradeship with which they instructed us.

In addition to communist principledness, consistency, and persistence in training, the most valuable things we learned from our Soviet brothers in arms include modesty, comradeship and cordiality in relations among servicemen, and respect for the history and achievements of the socialist brothers in class and arms. Not only I acquired this experience in long cooperation with the commanders in chief of the Warsaw Pact States' Joint Armed Forces and the Group of Soviet Forces in Germany--from Marshals of the Soviet Union I.S. Konev and V.I. Chuikov to Marshal of the Soviet Union V.G. Kulikov and Army General M.M. Zaytsev. It is also the experience of many other National People's Army servicemen.

The historic lessons which the Marxist-Leninist parties and armies drew from World War II include, finally, constant vigilance and combat readiness, which are necessary to ensure that no imperialist aggression catches us unawares. This lesson is more topical than every today, because the adventurist policy of the aggressive imperialist circles of the United States and the NATO bloc and also their comprehensive preparations for war represent "a general offensive against the material, spiritual, and cultural values which mankind has created during its history," Comrade Erich Honecker declared.

Of course, their military plans are doomed to failure. The wheel of history cannot be reversed. Forty years after the total defeat of German imperialism and the unconditional surrender of the fascist Wehrmacht and 30 years after the creation of the defensive alliance of Warsaw Pact countries the plans to liquidate socialism, the U.S. pretensions to unlimited world supremacy, and the West German revanchists' pretensions to a "Germany within the 1937 borders" are illusions and chimeras. But they are dangerous chimeras because aggressive political forces and powerful imperialist armed forces with modern equipment stand behind them.

The leading role played by influential FRG circles in attacks on socialism and peace is expressed not only in the rapid deployment of American medium-range missiles on West German territory and in the pressure which the FRG Government and West German mass media are putting on the small partners in NATO--Belgium and the Netherlands. It is also manifested in the zeal with which certain figures in the Bonn Government are praising President Reagan's plans for the militarization of space and are trying to participate in their implementation.

It is quite natural, therefore, that the CPSU and the SED and the general secretaries of our fraternal parties constantly emphasize that FRG policy on questions concerning the security interests of the Soviet Union, the GDR, and the other allied states will have decisive significance for the further development of relations between the USSR and the FRG and also between the GDR and the FRG.

The party and state leadership, the entire working people of the GDR, and their servicemen will make every effort to ensure that under the conditions of the exacerbated international situation the policy of military superiority of the United States, the FRG, and a number of other NATO countries has no chance of success. It is a question of strengthening socialism, for this is a most important precondition for ensuring peace. Precisely this aim is served by the extension of the term of the Warsaw Pact, which embodies the defensive military-political alliance of the fraternal socialist states. It is also a question of uniting on a worldwide scale all the forces of reason, realism, and goodwill against the Reagan administration's dangerous policy of arms race and confrontation.

The GDR party and state leadership resolutely supported the Soviet Union's new peace proposals set forth by Comrade M.S. Gorbachev, general secretary of the CPSU Central Committee. As Comrade Erich Honecker pointed out, "this is a new appeal from Moscow to avert the threat of an all-destroying nuclear war, to strengthen world security, and to ensure a stable peace. It is convincing and

clear how the Soviet Union, in accordance with the interests of mankind, is struggling to prevent the start of an arms race in space, to end it on earth, and to proceed to a radical reduction of nuclear arms, with the ultimate aim being their total liquidation."

Conscious of our joint responsibility for the defense of socialism and the strengthening of peace, we servicemen of the National People's Army will do everything to fulfill with honor the behest of the heroes of the Great Patriotic War. The 40th anniversary of the German people's liberation from fascism is a worthy reason to think about how to reinforce still further our socialist military alliance with their heirs to the victory and to promote with the reliable military defense of socialism the GDR's successful advance along the path chosen 40 years ago to a peaceful socialist future.

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## HONECKER ON VICTORY DAY

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[Article by Erich Honecker, general secretary of the SED Central Committee and chairman of the GDR State Council: "A World-Historic Victory for the Sake of Peace and Mankind's Happy Future"]

[Text] Berlin--The victory over Hitlerite fascism and the German people's liberation from Nazi rule, whose 40th anniversary we are now marking, are among the most significant events in mankind's history and profoundly changed the world's appearance. The victory of the Soviet Union and the other states of the anti-Hitler coalition saved the peoples from sinking into barbarism and opened their way to a better, peaceful happy future. That made it possible to achieve the goal for which the freedom-fighters in many countries, including antifascists, in Germany, offered staunch and courageous resistance to the darkest reaction that mankind has known since the middle ages. No more Nazism, no more war!--that was the oath sworn on the day of victory and liberation. At the same time it also included a warning and a pledge.

The Soviet Union accomplished an unparalleled and everlasting feat to enable the peoples to acquire freedom. It bore the brunt of the struggle against Hitler's Germany and, on the decisive front of World War II, routed the impudent aggressors who enslaved almost all Europe. The memory of the 20 million sons and daughters of the soviet land who gave their lives--man's most valuable possession--to save civilization will always be reversed by this and future generations. The history of World War II, which ended with the raising of the Red Banner of victory over the Reichstag in Berlin, center of the fascist reich, is an unparalleled heroic epic. Hitler's fascism, the most reactionary and aggressive product of German imperialism and militarism, launched World War II in an attempt to achieve world supremacy. Its attack on the Soviet Union was aimed at taking control of the latter's raw materials, and material resources in chauvinism, pan-Germanism, and the ideology of the "master race" and "inferior races," it set in motion an unprecedented machine of destruction aiming primarily to eliminate the Soviet Union as the bastion of socialism and peace. This, at the same time, marked the beginning of its own destruction.

The victory over fascism was an impressive demonstration of the soviet land's strength and might. Led by the CPSU, the soviet people and their valiant Red army defended the motherland, inflicted increasingly powerful blows on the

fascist invaders, and ultimately forced them into unconditional capitulation in their own lair. Thereby they executed the sentence passed by history. It was demonstrated during the fierce confrontation that socialism, embodying historical progress and the peoples' prosperity and future, is superior and invincible. After Red October a new chronological system began in the world which could be neither halted nor reversed. The Soviet Union's victory over Hitlerite fascism confirmed the truth that must be understood above all by those who still dream of a reactionary "new order" in the world and of revising the results of World War II and postwar development.

The emergence and development of the GDR in central Europe are among the profound changes which occurred as a result of World War II and subsequent development, changed the international correlation of forces, turned socialism into a world system, and helped to intensify the national liberation movement and considerably enhance the communist and workers movement. Liberation from German fascism enabled the German people to built their own life on a completely new basis. We have made use of that opportunity. We have consistently implemented the Potsdam agreement and have eradicated fascism, imperialism, and militarism together with their reactionary ideology. Under the leadership of Wilhelm Pieck, Otto Grotewohl, and Walter Ulbricht, the Communist Party of Germany and the Social Democratic Party of Germany were combined into the socialist unity part of Germany, the working class' unity was restored, and its harmful division overcome. Antifascist and democratic transformations were carried out in an integrated revolutionary process and in fierce confrontation with imperialist reaction and its minions, and the socialist revolution triumphed. We are now working to continue building the developed socialist society. These results demonstrated that socialism has been established once and for all on German soil.

On the 40th anniversary of the victory and of liberation, which is being marked in the GDR as a state holiday, we feel a sincere and whole-hearted need to confirm the unshakable combat community between the SED and the CPSU and the fraternal alliance between our states and peoples. This has been the reliable guarantee of the GDR's successful progress hitherto and will continue to be so in the future. Side by side with the Soviet Union and closely united with the entire socialist community, our country is fulfilling its internationalist duty as a reliable bulwark of socialism and peace in Europe. At the same time we have not forgotten the lessons of World War II and act in accordance with them.

The most important of those lessons is that peace must be safeguarded and that we must therefore steadfastly continue strengthening socialism. In the light of historical experience our people perceive the 40th anniversary of victory and liberation as a call to action. They regard it as a remarkable milestone on the path toward the 11th SED Congress, which will be held in April 1986 and will outline the prospects for the development of our country's socialist society for the immediate future and through to the next millennium.

Liberation Day--8 May--occupies a special place in our country's life. In connection with this noteworthy anniversary the SED Central Committee and GDR State Council, Council of Ministers, and National Front National Council issued an appeal at the beginning of January to all the country's citizens--an appeal which received a very broad response. The many initiatives it engendered

demonstrate, in the words of the appeal itself, that our entire life, labor, and struggle are connected with Liberation Day by thousands of links. GDR television has been showing Soviet Movies such as the one about Marshal G. Zhukov, the great military leader, the multipart series "Strategy of Victory," based on memoirs of well-known marshals and generals who took part in the Great Patriotic War, and a newsreel about the victory parade in Moscow's Red Square. Eye-witnesses have shared their reminiscences about the liberation via the mass media. Thousands of members of the Free German Youth league and the Ernst Thaelmann young pioneers' organization, together with Soviet Komsomol members and young pioneers, have followed the Soviet army liberators' path from the Oder river to Berlin. During socialist competition working people have adopted high pledges with the aim of overfulfilling the 1985 national economic plan. In industry and construction they pledged to do more than 1 day's work above the plan by 8 May.

Well-attended rallies devoted to the memory of the German fighters of the anti-fascist resistance and their foreign comrades have been held at national memorial complexes and the former fascist torture chambers of Buchenwald and Sachsenhausen, where many Soviet soldiers were killed, at Ravensbrueck, Brandenburg, and many other cities and venues. In recent days young people reaffirmed their solemn oath to carry out the behests of those who gave their lives in the struggle against fascism.

I am deeply moved by the ceremonial opening of the Memorial Museum to German Antifascists in Krasnogorsk--a museum created by the joint efforts of the CPSU and the SED. We particularly value the fact that the memory of Ernst Thaelmann, outstanding son of the German working class, leader of the Communist Party of Germany, and ardent internationalist, is alive in the USSR. His name was recently conferred on a Moscow square, where a memorial is also to be built to him. In the fascist torture chambers he symbolized the endurance, courage, and conviction of the antifascists when communists, acting in conjunction with social democrats, Christians, and people of various backgrounds, philosophies, and political creeds, were always in the forefront and suffered the heaviest casualties. Ernst Thaelmann warned: "He who chooses Hitler chooses war." He also warned: "Stalin will break Hitler's neck." In both cases he was proved right.

The more time separates us from 8 May 1945, the more clearly we see the greatness of the victory over fascism and the significance of its consequences, and this applies to our people's lives too. In its appeal of 11 June 1945, the Communist Party of Germany characterized the immediate steps aimed at overcoming the material and spiritual damage caused by World War II and beginning to build a new, better Germany. The land reform eliminated junkerdom, which had played such a reactionary role in the past. Enterprises belonging to Nazis and war criminals were expropriated and ownership of the means of production was transferred to the people. The democratic school reform laid the foundation for educating and training the young generation in an antifascist and socialist spirit. In a historically short time social relations were transformed more profoundly than in centuries before.

In that context the SED passed the test as society's leading force. From the very outset it sought to involve the broad people's masses in support of the social transformations and large-scale peaceful creation and managed to create a firm alliance with all antifascist and democratic forces.

The formation on 7 October 1949 of the GDR, the first worker-peasant state on German soil, was a turning point in the history of the German people and of all Europe. From the very beginning, our state developed as a member of the socialist family of the peoples. The Soviet Union ensured its military defense and, through its wealth of experience, helped our country's working class to take the first steps toward achieving people's power. It was of inestimable significance for us that the objective, law-governed features of socialist building had already been successfully applied in practice in the USSR. SED policy creatively combined the common law-governed features with our specific national conditions. Our party has always paid the utmost attention to the experience of the fraternal parties, above all the CPSU, and in so doing has repeatedly confirmed the great benefit that it brings to our country.

The GDR today is a politically stable socialist state in which dynamic economic development provides the basis for raising working people's material and cultural living standards. Our people devote all their energy to the cause of the continued building of a developed socialist society during which socialism's motivating forces and advantages become increasingly clear. Having begun to tackle that task, our party is fully aware of its scale. The SED program adopted by the ninth congress in 1976 characterizes the building of a developed socialist society as a historical process involving profound political, economic, social, cultural, and spiritual changes. The demands are high and the new section of the path involves new problems of growth. But we are managing to cope with them successfully under both more favorable and less favorable external conditions.

The SED considers the economy to be the decisive area of policy. The socialist planned economy, constantly being improved on the basis of the people's ownership of the means of production, ensures the substantial growth of economic power required by socialist building. The most significant economic breakthrough--the broad intensification of production--is taking place here in accordance with the objective demands. The economic strategy which the SED has been implementing since the early eighties is geared toward the vigorous advance of that intensification. The goal is to ensure high production growth under all conditions, as required by the strengthening of socialism. To this end it is necessary to improve labor productivity, reduce the proportional expenditure of materials and energy, and make better use of and modernize existing fixed capital. To these ends we must apply the latest scientific and technical achievements on a wide scale and use them to ensure the utmost efficiency.

By following that path from 1980 through 1984 we managed to increase national income from M187 billion to M220 billion while the number of people employed in the production sphere hardly increased at all. On average in the last 4 years the proportional expenditure of the national economy's important energy sources and raw and semifinished materials fell by 6 percent. The degree to which

production equipment is utilized also improved. In 1984 types of equipment of importance to the national economy were used in industry for an average of 16.2 hours per day as opposed to 15.6 hours per day in the previous year. These facts indicate that economic growth is increasingly being achieved by intensive-expanded reproduction.

This must also be the characteristic feature in the future. The economic use of advanced scientific and technical achievements acquires crucial significance here. New goods and modern techniques must be used to increase production efficiency. To achieve those aims we have set ourselves the task of increasing the proportion of new goods and of rapidly establishing their production in quantities which satisfy requirements. In 1984 industry had already achieved a 23.8-percent output renewal rate. This indicator is to be raised to 30 percent a year on average.

Those combines which, under a single leadership, unite a mighty scientific research and production potential--including subcontracted supplies which influence quality--and output sales have given a good account of themselves in that respect. The creation of rationalization facilities by their own efforts enables them to commission new techniques in just a few months. At the same time planning, balance, and autonomous financing are being improved with the aim of making output renewal increasingly the normal practice. In this respect it is necessary to proceed from high economic goals even at the scientific research and testing and design stage of work.

The widespread application of microelectronics is a task of a strategic character. The GDR is making great efforts, commensurate with its potential, to keep up with the quickening rate of international development in this sector. We cooperate here with the USSR and the other CEMA countries.

Within the structure of the GDR national economy an increasing share is being taken by sectors which embody scientific and technical progress. This refers, primarily, to electrical engineering, electronics, modern machine-building, and the chemical and light industries. GDR-produced fuel and raw materials are being used well here, and that requires great and consistent efforts.

The GDR's integrated economic and social policy, which ensures that the increasing labor productivity is combined with improved living conditions, is the driving force of people's labor activity and of all social development. The housing construction program is the nucleus of our party's social policy. This course instills in people a sense of confidence in the future. In this context the satisfaction of all citizens' basic needs is closely linked to the continued assertion of the principle of payment according to work, which is in line with socialism's needs. Thereby, we have long been able to provide the economic prerequisites for the steady development of socialist society and for raising people's living standards and have always managed to keep the country's defense capability at the required level. In resolving all these tasks our party has been doing much ideological and political work among working people and taking care to strengthen their social mode of thought and behavior and their internationalist stance.

Of great significance is the comradely cooperation between the SED and the parties and social organizations belonging to the GDR National Front, which helps to strengthen the people's moral and political unity. It is particularly pleasing to note the significant contribution by the Free German Youth and all the younger generation to building their socialist fatherland. The principle underlying our policy is to place full trust in young people and give them a high level of responsibility. Liberation Day--8 May--and the 12th world youth and student festival in Moscow are good occasions for them to confirm and deepen the friendship with the Soviet Union, the mightiest peaceful state in the world.

It is of more than symbolic significance that this year marks the 10th anniversary of the conclusions of the USSR-GDR Treaty on friendship, cooperation, and mutual assistance. Its provisions have long been filled with vital substance. This is convincingly demonstrated by the tremendous volume of reciprocal commodity turnover, which will exceed R15 billion in 1985. This figure represents the biggest long-term agreement ever concluded between the two countries. However, our cooperation is increasing in more than just quantitative terms. Production intensification occupies an increasingly important place in our joint efforts. It already serves as an important factor promoting the more rapid forward development of our country's economy.

The close combination of our potential with the Soviet Union's potential gives us an opportunity to successfully resolve those technological tasks on which the general level of national economic development depends at the present stage. Purposeful cooperation is the important key enabling us to fully reveal socialism's advantages, compete with imperialism in science and technology increasingly successfully, increase labor productivity more quickly, and ultimately outstrip the developed capitalist states in this decisive area.

The GDR's economic calculations are based on the firm foundation of close cooperation with the Soviet Union. This applies to fuel and raw materials and to cooperation in the processing industry, which is increasingly setting its sights on attaining the highest scientific and technical standard of products and techniques, high quality, and lowest possible prime costs. On the basis of these demands our combines aim to ensure that their production is structured in such a way as to reliably satisfy the Soviet Union's needs. This approach is in full accord with the requirements of the long-term program for cooperation in the scientific, technical, and production spheres for the period through the year 2000, whose implementation will lead to an even closer interlinking of our countries' national economies. As we know, the 5-year plan targets are being successfully coordinated on that basis and the coordination will apparently be completed by the middle of this year.

Our country's citizens received with great interest and approval the report on Soviet domestic and foreign policy questions delivered by M.S. Gorbachev, general secretary of the CPSU Central Committee, at the Central Committee's April plenum. His speech inspires the whole socialist community to consistently and flexibly continue our peace offensive aimed at saving mankind from nuclear annihilation. Of special significance is the task posed in the speech of further strengthening the socialist community countries' unity, which we will

promote by continuing to build the developed socialist society in the GDR and by deepening our ties with the USSR and the other fraternal states.

The strengthening of that unity is of great significance for implementing the socialist economic integration of all the CEMA members, the further deepening of which is determined by top-level conference decisions. This is all extremely important for socialism's economic stability and dynamism and for consolidating its world positions.

World War II, which ended 40 years ago, was the most bloody and destructive war in mankind's entire history. It accounted for 50 million lives, caused incredible suffering to the countries attacked by Hitlerite fascism, and destroyed an incalculable number of material and cultural assets. Such a catastrophe must never be repeated. That demand is now particularly urgent when there are weapons of tremendous destructive power in existence and when the danger of nuclear war has increased through the fault of the imperialist policy of confrontation and arms race buildup. The U.S. "star wars" programs are aimed at further increasing that danger and turning the heavens into the threshhold of nuclear hell.

That is why there can be no task more important than safeguarding peace. The Soviet Union, unswervingly loyal to its historic peace mission, is now promoting important new initiatives previously advanced by M.S. Gorbachev in conversation with PRAVDA's editor. We wholly and fully support his proposal on immediately halting all work on the creation of space weapons, freezing strategic nuclear arms, and suspending the deployment of U.S. medium-range missiles in Europe and the implementation of our own countermeasures. By its unilateral moratorium the USSR confirms its desire to strive for practical measures to consolidate peace. That is also the aim of the USSR supreme soviet presidium's announced agreement to the imposition of a moratorium on all nuclear weapons tests beginning 6 August 1985--the anniversary of the dropping of the U.S. atomic bomb on Hiroshima. Indeed, such a measure by all nuclear states would be an exceptionally effective step toward curbing the nuclear arms race.

The peoples expect that the USSR-U.S. talks in Geneva on the whole range of nuclear and space arms will produce positive results promoting the limitation and reduction of nuclear arms with a view toward ultimately eliminating them completely. The GDR highly appreciates and supports the determined and resourceful work of our Soviet friends and comrades in this sphere.

The Warsaw Pact, whose 30th anniversary we are marking at present, is a powerful factor for peace and security. Recently in Warsaw we extended the treaty's term for further decades. Our friendship is constantly deepening on this basis. The Warsaw Pact's military organization protects our socialist gains like a reliable shield. The GDR makes its active contribution to that. It helps to reduce world tension and, by developing international cooperation and dialogue, helps to find realistic solutions so as to promote the cause of disarmament on the basis of the principle of equality and identical security.

We are firmly convinced that the forces of peace will succeed in halting the forces of war. Socialism is now incomparably more powerful, stronger, and more influential than before. Its existence and policy inspire all in the world who cherish the cause of peace and progress. In so saying we realize that we need even more determined efforts to eliminate the danger of war and achieve an improvement in international affairs. We are also encouraged by the growth of the world peace movement, which the NATO countries' governments cannot ignore. Even among those governments the realization is growing that more weapons do not mean greater security and that there is no acceptable alternative to peaceful coexistence among states with different social systems.

The struggle for victory over Hitlerite fascism, whose lessons are still highly relevant today, gave rise to the anti-Hitler coalition, an unprecedented example of collaboration among states with different social systems and political and philosophical positions. Powerful popular liberation movements and forces of the most diverse orientation united in that struggle to achieve the most important common goal of routing of fascism. We see something more than simply a tribute of respect to past events in the fact that Great Patriotic War veterans and U.S. war veterans met one another on 25 and 26 April at Torgau in the GDR, where the historic meeting on the Elbe took place 40 years ago, so as to reaffirm, in the spirit of the anti-Hitler coalition, their common desire for peace and the peoples' security and cooperation.

It is now possible and necessary to unite all those in the world who honestly strive for peace and work in practice to safeguard it. Whatever differences there may be on certain questions, they must not be an obstacle to the creation of a coalition of reason and realism against the threat of nuclear war. All countries--large, medium, and small, down to the very smallest--must make their contribution to the common cause of preserving peace.

The GDR, located on the dividing line between socialism and imperialism and the Warsaw Pact and NATO, bears a high responsibility. Loyal to the anti-fascists' behests, it is making every effort to ensure that war never again carnates from German soil, only peace. It is also guided by that tenet in its relations with the FRG, whose transformation into a U.S. nuclear missile firing range poses a serious threat to peace--not least because it encourages those who are striving to revise the realities formed as a result of World War II and postwar development. We will always continue to give revanchism a fitting rebuff.

In the current tense and complex world atmosphere, hotbeds of regional conflict are still smoldering from which the flames of a big war could erupt. We advocate the resolution of international disputes by peaceful means. That is the only way to reach a settlement which meets the peoples' interests and helps to consolidate peace throughout the world, be it in the Near East, Central America, South Africa, or any other part of the world. The GDR combines that stance with active anti-imperialist solidarity.

On the 40th anniversary of victory and liberation we turn our gaze toward the future with confidence. This jubilee gives a powerful impetus to the further struggle for the triumph of socialism's bright ideals and for ensuring that peace ultimately becomes the normal way of life for the peoples of our world.

From the bottom of my heart I send a fraternal greeting to Lenin's country, to the communists and all working people of the glorious Soviet Union, and in particular to participants in the Great Patriotic War. I wish you outstanding new successes in the preparation of the 27th CPSU Congress for the good of the Soviet people and all peace-loving mankind.

CSO: 1801/226

ARMED FORCES

COL GEN OSIPOV ON ARMY, NAVY DAY

Kiev POD ZNAMENEM LENINIZMA in Russian No 2, Jan 85 (signed to press 14 Jan 85)  
pp 35-38

[Article by Col Gen V. Osipov, commander Red Banner Kiev Military District:  
"Invincible and Legendary"]

[Excerpts] The history of our great Soviet motherland.... The fate of its Armed Forces is inseparably merged with it.

Our army was born, as is sung in a famous song, under the red banner in the terrible year of 1918 when the forces of international imperialism and internal counterrevolution took up arms against the young republic of Soviets.

A military organization--the army--was required to defend the achievements of the Great October. It was just then that V. I. Lenin, scientifically substantiating the military program of proletarian revolution and having worked out the teaching on the defense of the socialist fatherland, directed the creation of the Workers' and Peasants' Red Army--the RKKA.

The Soviet Army is an army of our entire working people. It was created for the defense of their interests and of the state. Only a socialist social system could create such a fundamentally new army. The bourgeois army is its direct opposite. It always was and remains the chastiser of the popular masses which are recalcitrant toward capitalism, that force which is hostile to them and which V. I. Lenin called the weapon of reaction, the servant of capital in the struggle against labor, and the executioner of popular freedom.

The party's best sons marched in the front ranks of the Red fighters. They were examples of valor, discipline, and loyalty to communist ideals. About 300,000 party members--almost half of them--were in the Red Army by the end of the Civil War.

This shows convincingly that the best, leading part of the workers and peasants boundlessly believed in the Lenin party from the first days of the existence of the Country of Soviets and moved along the path which it indicated. The communists introduced high political consciousness in the Red Army and Red Navy masses and instilled in them confidence and steadfastness and inspired them for a soldierly exploit. Under the direction of the commissars the political organs and party organizations created by the party explained to the fighting men and

commanders the goals and meaning of the war and educated them politically. "And," V. I. Lenin stressed, "only because the party was on guard, because the party was the most strictly disciplined, and because the party's authority united all departments and institutions, and tens, hundreds, thousands, and in the end millions marched as one under the slogan which was given by the Central Committee, and only because unheard of sacrifices were made,--only for this reason could the miracle which occurred take place. Only because of this were we able to win despite the two-fold, three-fold, and four-fold campaign of the Entente's imperialists and the imperialists of the entire world" (Vol 40, page 240).

The war against the villainous aggression of the Hitlerite bloc was a most serious test of all the material and spiritual strengths of our society. It concerned the life and death of the socialist state and the fate of social progress in the entire world. The Great Patriotic War ended with victory, the 40th anniversary of which our people will mark ceremoniously this May.

The advantages of the socialist state's military organization and the advantages of the Soviet Army--a new type of army-- were manifested in its power. Only such an army could hold back the onslaught and then crush the war machine of a strong, well-equipped enemy.

Already in the first months of the war and during the terrible year of 1941 Hitler's counting on a "blitzkrieg" was buried forever at the walls of the hero cities of Odessa, Sevastopol, Kiev, and Leningrad. The myth of the fascist Wehrmacht's invincibility was dispelled in the Battle of Moscow. The Battle of Stalingrad was the start of a fundamental change in the entire course of World War II.

After the victorious conclusion of the battle for the Dnepr, as a result of powerful offensive operations in 1944 the Hitlerite army was hurled beyond the borders of the USSR. The Soviet Army began the accomplishment of its international mission--ridding the peoples of Bulgaria, Romania, Hungary, Poland, Czechoslovakia, Yugoslavia, Austria, and Norway of fascist slavery.

The Soviet liberator-soldiers accomplished the same mission in Asia, too.

Everything accomplished by the Soviet liberator-soldier, the Soviet working people, and by the hero people has been inscribed in history in gold letters. "This victory strengthened the authority and international position of the USSR," it says in the country's Basic Law, "and opened new favorable opportunities for the growth of the forces of socialism, national liberation, democracy, and peace in the entire world."

Just as in the period of the Civil War, in the fiery years of the Great Patriotic War the organizer and inspirer of the repulse of Hitlerite aggression was the Communist Party. In all its activity it was steadfastly guided by the instruction of Lenin concerning the necessity for the unity of the political, economic, and military leadership and concerning the organic unity of the front and the rear. "Everything for the front, everything for victory!"--this slogan which was put forth by the party became the law of the life and activity of the Soviet people for the entire 1,418 days and nights of the battle for our great victory.

The party's best sons were on the front line and in the first echelon of the fatal struggle with fascism. By personal example and flaming Bolshevik word and by confidence in victory and their fearlessness commanders and commissars, political instructors and party organizers, regimental agitators and rank and file communists inspired the fatherland's defenders to steadfastness and heroism, united their ranks, and called for and led them to victory.

And our soldiers, sergeants, and officers accomplished heroic exploits daily. Their heroism became truly mass heroism.

The Ukrainian land remembers sacredly the heroism of the Soviet servicemen and the scorching by fire. In 1944 alone Moscow saluted the valiant troops of the Ukrainian fronts, the Separate Maritime Army, and the seamen of the Black Sea Fleet and the Azov Military Flotilla more than 40 times. More than 1,100 large units and units which distinguished themselves in battles for the liberation of the Ukraine were awarded the honorific names of cities and other populated places which they liberated.

For courage and valor displayed in the struggle against the German-fascist aggressors, more than 2,000 natives of the Ukraine were awarded the title of Hero of the Soviet Union, 32 of them--twice, and the famous pilot I. N. Kozhedub --three times.

The unsurpassed might of our army was disclosed once again in the battles for the Ukraine and Soviet military art was enriched with important principles and discoveries. Here the outstanding Soviet military leaders G. K. Zhukov, A. M. Vasilevskiy, K. K. Rokossovskiy, N. F. Vatutin, I. S. Konev, R. Ya. Malinovskiy, F. I. Tolbukhin, A. A. Grechko, K. S. Moskalenko, and others demonstrated their generalship once again.

The liberation of the Ukraine was a great exploit of all the peoples of our country. Russians and Kazakhs, Ukrainians and Georgians, and Belorussians and Uzbeks--representatives of more than 60 nations and nationalities of the USSR--fought heroically on Ukrainian soil. During the assault crossing of the Dnepr alone 2,438 soldiers and officers were awarded the title of Hero of the Soviet Union.

The Soviet people have been living and working under a peaceful sky for a little less than four decades. The building of a developed socialist society has become the most important result of their selfless labor.

The wisdom and far-sightedness of the CPSU in the leadership of the Armed Forces were displayed with new force during this period. Thanks to its constant concern, our Armed Forces entered a qualitatively new stage of development and received improved models of combat equipment and weapons. Nuclear weapons and the means for their delivery to the target were created through the efforts of Soviet scientists, which put an end to imperialism's nuclear blackmail.

Important changes also took place in the organizational structure of the Armed Forces. The Strategic Rocket Forces were created. The firepower and shock action of the Ground Forces, the most numerous and versatile in their combat composition, increased significantly. The combat capabilities of the National Air Defense Forces and the Air Forces increased, and the Navy became nuclear while

its surface ships and submarines are capable of accomplishing missions of any complexity.

The Soviet Armed Forces are now the military organization of a common state and the multinational Soviet people--a new historic community of people. They are a good school for combat skill and the ideological, moral, and physical up-bringing of the servicemen of the 1980's--the successors to the glorious combat and labor traditions of the older generation.

However improved military equipment may be, the chief figure in the army remains man who masters this equipment. Educated, well-trained young people are joining the ranks of the motherland's defenders. During their years of service they pass through a good school for maturing: they are tempered politically and the best qualities of man and citizen are strengthened--flaming patriotism, responsibility to society, and a readiness to accomplish their constitutional and military duty at any price.

Under contemporary conditions the Soviet Armed Forces and the armies of the fraternal socialist countries are accomplishing missions of extreme importance. They are reliably defending the revolutionary achievements and the peaceful labor of their peoples and, by their combat might, are pinning down the predatory, dictator aspirations of reactionary imperialist circles.

The aggressiveness of international imperialism increased especially from the start of the 1980's. The United States and the other NATO countries are conducting intensive military preparations directed against the countries of the socialist commonwealth. The main goal of United States policy is to destroy the military-strategic balance which has developed in the world and to subordinate the course of world events to its will. The placement of American nuclear medium range missiles in NATO countries represents a special danger for the cause of peace.

From the situation which has developed at present in the world arena, the CPSU and the Soviet government draw the conclusion that, on the one hand, it is necessary to double and triple efforts in the struggle for peace and for relaxing the danger of nuclear catastrophe which hangs over mankind and, on the other hand, tirelessly to strengthen the country's defense and the combat might of the Soviet Armed Forces and maintain the greatest vigilance. "...As long as military and political tension exists and as long as the nuclear missile danger on the part of the United States and the NATO states hangs over our country, we should keep our powder dry and always be on the alert, , , , " said the General Secretary of the CPSU Central Committee and the Chairman of the Presidium of the USSR Supreme Soviet, Comrade K. U. Chernenko, at a meeting with workers of the Moscow "Serp i Molot" plant on 29 April 1984.

The motherland's armed defenders unanimously approve and support the domestic and foreign policy of our party and are living with the same thoughts and aspirations as their people. They do not forget for a minute that the "crusade" declared by Reagan, which was also joined by the leading NATO countries, obliges us to maintain vigilance and combat readiness at the highest level.

In the current training year the Soviet servicemen are accomplishing their patriotic duty with special feeling. For it is the year of active preparation for the 27th CPSU Congress and the year of the 40th anniversary of our great victory. The enthusiasm and lofty patriotic feelings of the motherland's defenders were brilliantly displayed in the initiative of the personnel of the leading units and the missile cruiser which was approved by the Soviet Ministry of Defense and the Main Political Directorate of the Soviet Army and Navy. The initiators called upon all servicemen to join actively in socialist competition under the slogan, "Our most selfless soldierly labor for the 40th anniversary of the Great Victory and the 27th CPSU Congress!" This call was ardently supported among the troops and in the fleets.

The soldiers, sergeants, warrant officers [praporshchik] and officers of the twice order-wearing tank regiment commanded by Lieutenant Colonel V. Sokolov were the first to respond to this call in the Red Banner Kiev Military District. The unit's personnel assumed increased socialist obligations and are accomplishing them successfully.

Now, during the days of intense winter combat training, the troops are persistently mastering the procedures and skills necessary in contemporary battle. They are learning to operate at night as well as day, to destroy the targets with the first round and at maximum ranges, endure prolonged physical and psychological loads, and to master contemporary equipment at a high level.

In instilling lofty moral and combat qualities in the personnel, commanders and the party-political apparatus of units and subunits teach them using the front-line experience of their hero-brother-soldiers. The continuity of combat traditions is clearly expressed in the patriotic movement everywhere for the right to shoot and drive combat vehicles for the frontline Heroes of the Soviet Union. Active party-political work is aimed at the accomplishment of all the missions facing the troops. As always, the communists are in the lead.

The soldiers, sergeants, warrant officers, and officers of the combat collectives headed by Officers A. Kafanov, N. Khayarov, F. Koretskiy, V. Konovalov, and many others are persistently mastering the experience of the frontline fighters and undeviatingly following the Lenin behest--to study military affairs in a genuine manner. On the exercise fields, the rifle ranges, and ranges and in the course of performing operational readiness duty the men of the district are doing everything to greet in a worthy manner the 67th anniversary of the Soviet Armed Forces and the forthcoming elections to the republic's Supreme Soviet and local soviets of people's deputies.

However, what has been attained is not the limit. Even more difficult tasks are ahead of us. And they will be accomplished.

The party, Soviet state, and the people are giving to their servicemen everything necessary for fruitful training and service and daily life. They look with deep respect and confidence on those who are defending the peaceful labor of the Soviet people. It is our sacred constitutional duty to justify this confidence and to be in readiness for the decisive repulse of any aggressor.

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ARMED FORCES

OBITUARY: GENERAL OF THE ARMY PAVEL IVANOVICH BATOV

Announcement of Batov's Death

Moscow KRASNAYA ZVEZDA in Russian 25 Apr 85 p 3

[Article: "Army General Pavel Ivanovich Batov"]

[Text] Army General Pavel Ivanovich Batov, prominent Soviet military leader and active participant in the Civil War and the Great Patriotic War, Twice Hero of the Soviet Union, died after a serious and lengthy illness. He gave his entire, conscious life in selfless service to his people, the socialist Motherland and the work of the Communist Party of which he was a member for more than 50 years.

P. I. Batov was born 1 June 1897, in the village of Filisovo, Rybinsk Rayon, Yaroslav Oblast to a peasant family. He began his working life early. He fought in the First World War. In 1918 he voluntarily joined the Red Army and participated in suppressing counterrevolutionary outbreaks and mutinies.

Starting in 1926 he successively commanded a company, a battalion and a rifle regiment. In 1936-1937 he fought as an Internationalist on the side of the Republican forces in Spain. Upon his return he commanded a Rifle Corps. In 1940 he was the deputy commander of troops in the Transcaucasus Military District.

In the Great Patriotic War, P. I. Batov applied his combat experience and deep knowledge of military affairs. At the beginning he commanded a Rifle Corps and then was deputy army commander and assistant commander of troops on the Bryansk Front. From the Fall of 1942 to the end of the war, he was an army commander whose troops distinguished themselves in the Stalingrad and Kursk battles, in the Dnieper engagement, during the liberation of Belorussia and in the Vistula-Oder and Berlin operations. During combat operations P. I. Batov's military talents and organizational capabilities were clearly shown. Exceptional bravery and courage in combat and an inexorable will to accomplish assigned missions were his characteristics.

In the postwar years P. I. Batov occupied the position of army commander, first deputy to the commander-in-chief Group of Soviet Forces in Germany, commander of troops in the Carpathian and Baltic Military Districts and the Southern Group of Forces. P. I. Batov was the chief of staff of the Combined Warsaw Pact

Forces from 1962 until 1965. After that, he had a responsible position in the USSR Ministry of Defense. For a long time P. I. Batov headed the Soviet War Veterans Committee.

P. I. Batov was known in the Soviet army as a prominent military leader who had made a significant contribution to the increased military readiness of Soviet armed forces and training and educating personnel. While chief of staff of the Combined Forces, he was constantly concerned about strengthening the combat comradeship of the countries who participate in the Warsaw Pact.

P. I. Batov actively participated in the country's social and political life, was a delegate to many party congresses and was elected deputy to the Supreme Soviet of the USSR.

In all matters entrusted to him by the party, P. I. Batov displayed exceptional diligence, modesty, high ethics, sensitivity and attention to people.

For exceptional service to his Motherland, P. I. Batov was twice awarded the title Hero of the Soviet Union. He was decorated with eight Orders of Lenin; the Order of the October Revolution; three Orders of the Red Banner; three Orders of Suvorov, First Class; Order of Kutuzov, First Class; the Order of Bogdan Khmel'nitskiy, First Class; "For Service to the Motherland in the Armed Forces of the USSR," Third Class; "Badge of Honor" and medals. P. I. Batov's service was also recognized by many orders and medals from socialist and other countries.

The bright memory of Pavel Ivanovich Batov, our combat friend and comrade, true son of the Communist Party and the Soviet People and fiery patriot of the Soviet Motherland, will be preserved forever in our hearts.

M. S. Gorbachev, V. V. Grishin, G. V. Romanov, N. A. Tikhonov, V. M. Chebrikov, S. L. Sokolov, S. F. Akhromeyev, V. G. Kulikov, V. I. Petrov, A. A. Yepishev, N. I. Savinkin, V. L. Govorov, V. F. Tolubko, Ye. F. Ivanovskiy, A. I. Koldunov, A. N. Yefimov, S. G. Gorshkov, S. K. Kurkotkin, V. M. Shabanov, N. F. Shestopalov, A. T. Altunin, I. N. Shkadov, A. I. Sorokin, A. M. Mayorov, A. I. Gribkov, V. S. Nechayev, D. A. Volkogonov, P. A. Gorchakov, M. K. Popkov, S. A. Bobylev, L. L. Batekhin, P. N. Medvedev, K. S. Moskalenko, S. I. Rudenko, I. G. Pavlovskiy, A. S. Zheltov, A. P. Silant'yev, S. P. Ivanov, N. P. Dagayev, P. N. Lashchenko, A. A. Luchinskiy, N. G. Lyashchenko, A. P. Beloborodov, I. I. Gusakovskiy, A. L. Getman, D. D. Lelyushenko, V. N. Dutov.

#### Funeral Arrangements

Moscow KRASNAYA ZVEZDA in Russian 25 Apr 85 p 3

[Text] The casket with Army Gen P. I. Batov's body will be on display in the Red Star Hall of the Soviet Army Central House imeni M. V. Frunze (Commune Square, No 2) It will be opened to pay one's respects from 10-12 on 25 April 1985. The funeral will be at 1 o'clock 25 April at the Novodevich Cemetery.

12747

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ARMED FORCES

LETTERS TO KRASNAYA ZVEZDA EDITOR, RESPONSES

Poor Range Training Corrected

Moscow KRASNAYA ZVEZDA in Russian 6 Apr 85 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'A Stroll on the Range'"]

[Text] That was the title of a critical article by Lt Col N. Fedoseyev which was published on 12 February of this year.

The editors were informed by the Combat Training Directorate of the Red Banner Siberian Military District that the criticism had been deemed proper.

The article was discussed in all district units [soyedineniye] and at a party meeting of the SibVO [Siberian Military District] Combat Training Directorate. An integrated commission under the direction of Lt Gen B. Tkach, first deputy district commander, worked in the unit [chast'] where Maj Yu. Spesivtsev serves. During its work it gave practical assistance to subunit commanders in organizing combat training classes and in improving the technical training facility.

Battalion commander Maj Yu. Spesivtsev and his political deputy Maj A. Mal'-tsev were heard at a session of the unit party buro, where they were given strict instructions on the poor quality of classes and on formalism in organizing socialist competition during combat training.

The officials guilty of disrupting weapon training classes were held answerable for strict party and disciplinary liability.

School Administrative Procedures Corrected

Moscow KRASNAYA ZVEZDA in Russian 6 Apr 85 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'The Right Hand Doesn't Know...'" ]

[Text] The letter by Col V. Rudenkov published under that title on 12 February told about facts of an unconscientious attitude of certain workers in the personnel department of the Togliatti Higher Military Construction Command

School toward their duties. Formal, contradictory responses came from the school in answer to repeated queries of the Zaliznichnyy Rayon Military Commissariat of Kiev about results of acceptance for studies of Cadet Nominee S. Ushakov, who had been sent to take entrance exams.

As the editors were informed by Col N. Kalashnikov, chief of the school political department, the facts set forth in the letter had been confirmed. An official announcement of Ushakov's enrollment in the school's first course had been sent to the Zaliznichnyy Rayon Military Commissariat.

Sr Lt A. Biryukov, assistant chief of the personnel department, and Maj M. Vdovin, acting chief of the personnel department, had been given disciplinary punishment for deficiencies in their work.

The response received by the editors also states that Personnel Department Chief Lt Col V. Chebotarenko, whose name was repeatedly mentioned in the published letter, had been absent from the school from July through October of last year because of illness. But then why did responses to the military commissariat's queries come signed by this officer? It is obvious that matters also have to be put in order here.

#### Military Sovkhoz Cattle Problems

Moscow KRASNAYA ZVEZDA in Russian 9 Apr 85 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'Winter on the Farms'"]

[Text] That was the title under which KRASNAYA ZVEZDA published an item on 19 January which told how KRASNOYE ZNAMYA, newspaper of the North Caucasus Military District, covers the farming activities of military sovkhozes and particularly the progress of wintering of cattle on the farms.

Maj Gen M. Kovalevskiy, first deputy chief of the district political directorate, announced that the facts cited in KRASNAYA ZVEZDA concerning the state of affairs in the Kadamovskiy Sovkhoz actually did occur. The newspaper coverage was discussed at a session of the sovkhoz party committee. Sovkhoz Chief Engineer Ye. Getman, Work Superintendent N. D'yachenko and V. Molchanov, foreman for labor-intensive processes in animal husbandry, were given party and administrative punishment for serious omissions in work. By order of the deputy district commander for rear, Military Sovkhoz Director V. Kostoglodov was given a strict warning for unsatisfactory wintering of cattle.

Specific steps were taken to improve the state of affairs in the sovkhoz. At the present time the milk yields for each cow on forage increased one kilogram in comparison with the very same period of last year, and they increased 68 quintals for the herd as a whole.

### Officer Relieved for Misconduct

Moscow KRASNAYA ZVEZDA in Russian 9 Apr 85 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'Position'"]

[Text] An article by Lt Col P. Chernenko was published under that title on 27 December 1984. It told of omissions in the service of battalion commander Maj V. Zlobin, of his rudeness and tactlessness, and of violations of standards of party life.

The editors received a response from the political department of Far East Military District Aviation, which stated that Party Member V. Zlobin was held liable for party punishment, he was given a severe reprimand with an entry in the record, and he was relieved of his position.

### Instructor Pilot Lacks Uniforms

Moscow KRASNAYA ZVEZDA in Russian 17 Apr 85 p 2

[Letter to editors from Lt S. Zamakhov, military pilot-instructor: "What Shall I Wear to Fly?"]

[Text] Dear editors! Over a year has gone by since I completed military school and have been serving in the air training regiment of the Orenburg Red Banner Higher Military Aviation School for Pilots imeni I. S. Polbin, but I still haven't been provided with the necessary clothing for air operations. I flew the entire first winter in a spring/fall jacket. Spring came and I'm thankful that a comrade helped me out and loaned me summer clothing. Now a second winter has arrived but I just have not been able to obtain a warm jacket. The last time we were issued a sawknife was in 1981 and the "Shturmanskiye" [Navigator's] watch is given as a gift, and not to everyone who is authorized it.

One might get the impression that I keep demanding something for myself, but it seems to me that a pilot's gear is far from a personal matter. Flight safety depends on this.

### Passed-Over Officer Retaliates

Moscow KRASNAYA ZVEZDA in Russian 12 Apr 85 p 2

[Article by KRASNAYA ZVEZDA correspondent Capt 3d Rank S. Turchenko: "In the Wake of a Letter: 'The Dossier'"]

[Text] The editors of KRASNAYA ZVEZDA received three letters from Maj I. Myshkin in a short period of time. The officer reported in his letters that an unpleasant situation had shaped up in the squadron, which bears the title of outstanding, and that there are instances of preconditions for flying incidents and of rudeness of some officers in handling subordinates. For his part, Maj Myshkin now is waging an irreconcilable campaign against

deficiencies and so had fallen into disgrace with the command element. In short, he was suffering because of criticism.

In checking the facts stated in the letters, I had occasion to chat with many officers in the regiment, and each of them described Myshkin in approximately the same way: he was always calm and even-tempered until recently, but now it was as if he were a different person. He goes around the regiment like an inspector trying to find deficiencies everywhere and writing down each trifile...

The position of air squadron commander became vacant in November of last year and two nominees were discussed for this position: Capt V. Khalyavin and Maj I. Myshkin.

Capt Khalyavin was distinguished by good job and command qualities, initiative, and an imaginative approach to the job. It is true that he was young and didn't have much experience in flight and instruction work. Maj Myshkin, conversely, had more than enough flight experience but on the other hand, he didn't stand out among others in his organizing abilities and neither subordinates nor superiors had noticed a commander's trait in him. Finally the command element decided to entrust the squadron to the energetic and self-starting Capt Khalyavin.

It turns out that news about this spread around the unit even before a rough copy of the order was made out. Maj Myshkin admits that this news "struck my very heart." In his words, he felt degraded and bypassed. But the officer didn't plan to "give up without a fight."

As his first order of business he went to the regimental commander and expressed his opinion about the decision on the personnel matter. The commander's answer didn't satisfy him. The major signed up for an audience with the senior commander, but he didn't sit idly by awaiting the appointed day. It was then that the officer started a "dossier," where he began to enter with scrupulous precision all deficiencies in the unit which caught his eye. He didn't hide the fact that he was counting on his notes as a "trump card."

In the meantime the day of routine training flights arrived and here Myshkin surprised even those who prior to this time had been somewhat sympathetic toward him. He declared to the regimental commander, with the youth of the new squadron commander in mind, that he "didn't plan to fly with Young Pioneers" and he arbitrarily deleted his name from the flight schedule. The commander immediately relieved the officer from any flying and reported the incident through command channels.

Myshkin realized that he had overdone it. Here is where he decided to play his "trump card": numerous letters and statements in which "dossier" data figured began to rain down in various echelons.

In a conversation Maj Myshkin didn't hide the fact that the surge of his "principle" was a reaction to what was in his opinion an improper decision on the personnel matter. ("I have to protect myself in some way.") But then he

launched an attack: "It doesn't matter what prompted me to fight deficiencies: the regulations obligate us not to ignore any kind of violation. Let's look at my conduct from this very viewpoint, for I tried to write the truth."

As a matter of fact, some of the deficiencies enumerated in the letters to the editors are confirmed. There were instances in the squadron of a cover-up of violations of military discipline, additions in timing flights, and rudeness of some officers. The regimental commander, his deputies and staff officers have something to think about here, but the blame for all this cannot be shifted to the young squadron commander alone. The roots of these deficiencies extend into the past, and Maj Myshkin is among those who must bear responsibility for their tenacity. As a deputy squadron commander he spent more than one year indifferently observing violations of military and flight discipline, closing his eyes to instances of additions to minutes of flying time, and promoting the cover-up of preconditions for flying incidents through the personnel's fault. Until the appointment of a new squadron commander, Party Member Myshkin didn't even try to make such facts public and not once had he drawn the attention of the squadron party organization to those problems.

When the talk turned to this the major was clearly disconcerted. After a silence he said: "I submitted a request for a transfer out of the unit. I await a decision."

Later I was shown this document in Baltic Fleet Aviation Headquarters. I will quote its content, since the request will clarify Maj Myshkin's position and will characterize Myshkin himself to a certain extent: "I request you petition the higher command element for my transfer to another fleet in view of the assignment of an untrained pilot to the position of squadron commander and my lack of prospects in this regiment."

Party Member Maj Myshkin just was not able to rise above the imaginary personal wrong and impartially evaluate the existing situation and his own conduct. He lacked the courage to fight down an oversensitive pride and ask himself the question with all party principle: "Perhaps the senior officers nevertheless are right in not entrusting me to command the squadron?" The fact is that a person wins the right to command not by collecting a "store" of facts large and small, but by daily, uncompromising, active struggle against deficiencies, by the selfless and imaginative performance of official duties, and by the ability to place public interests above personal interests.

### First Sergeant's Duties Questioned

Moscow KRASNAYA ZVEZDA in Russian 18 Apr 85 p 2

[Letter to editors from WO [Praporshchik] A. Lamskov and commentary by Col S. Rodin, chief of political department of rear of Red Banner Far East Military District: "Letter with Commentary: At Beck and Call"]

[Text] Dear editors! Three years ago I completed warrant officer school and was appointed company first sergeant in one of the rear units of our Far East Military District. This position is not known to be an easy one. A first sergeant's duties are vast. To cope with them, a person has to spin like a squirrel in a cage every day. But I like my work. I like to indoctrinate privates and teach them the ABC's of Army service.

Nevertheless, at times I feel no satisfaction from service, the reason being that I am not completely performing my immediate duties. On some days I'm not even in the subunit. I travel as a vehicle commander, I fetch some kind of supplies, or I run errands for the most varied unit officials, and company personnel are left without a first sergeant.

In short, the work of a first sergeant has to be organized more precisely, but how can this be achieved?

At the editors' request, Col S. Rodin, chief of political department of the rear of the Red Banner Far East Military District, responds to WO A. Lamskov.

I believe the problem about which the author of the letter writes does not just trouble him alone. In visiting the units I have noticed that subunit first sergeants in fact often are doing other jobs. What errands aren't they running at times, and all to the detriment of work in the subunit itself with specific people? Unfortunately, that also happened with WO Lamskov.

Meanwhile, the Interior Service Regulation lists the duties of a first sergeant in 24 paragraphs. Each paragraph is directly connected with the maintenance of regulation order in the subunit, fulfillment of the rules of performing duty by privates and NCO's, and the provision of authorized property to servicemen. Where a first sergeant does what is prescribed for him to do, he is a reliable assistant of the commander in indoctrinating the personnel and in strengthening military discipline.

For example, that is how matters are arranged in Unit "X." There all instructions ordinarily are issued to subunit first sergeants, as prescribed by the Regulation, by their immediate superiors.

I had occasion to chat with Sr WO I. Stanchevskiy, first sergeant of a motor transport company in this unit. Of course, he too has unexpected "situations," but this is an exception to the rule. For this reason there is always order, cleanliness and comfort in the company. The personnel are provided with everything authorized. The order of the day is fulfilled precisely. The

interior detail performs duty well. In short, one senses from everything that the company has a genuine proprietor and a reliable assistant to the commander.

#### Boatswain's Mate Rating Problem

Moscow KRASNAYA ZVEZDA in Russian 19 Apr 85 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'How Can One Become a Master?'" ]

[Text] The letter from Sr WO [Michman] K. Lukashevich published by that title on 26 February stated that chief boatswain's mates in Unit "X" were deprived of an opportunity to receive the rating of master. As the editors were informed by Rear Adm V. Semiletenko, first deputy chief of political directorate of the Twice-Honored Red Banner Baltic Fleet, the facts cited in the letter had been confirmed. Sr Lt M. Klyukvin was held liable for disciplinary punishment for a negligent attitude toward compilation of lists for improving class ratings. Capt 3d Rank D. Balagura and Sr Lt P. Veltlitskiy were given strict instructions about poor supervision over the personnel's development of military proficiency. Sr WO K. Lukashevich will be presented to the Fleet rating commission in June of this year.

#### Parents Contribute to Drinking

Moscow KRASNAYA ZVEZDA in Russian 25 Apr 85 p 2

[Article by Sr Lt A. Savvov: "After Drinking with Daddy..."]

[Text] Military builder Pvt V. Gritsay didn't return from pass. One can imagine how many nerves and efforts were spent by his commanders and colleagues in those agonizing hours, for it was well known that the soldier had neither relatives nor close acquaintances in the city. The weather was bad and some misfortune must have occurred with the lad.

He was found in the workers' dressing room at a construction site which our subunit was building. Misfortune actually had befallen him, but it had come from a completely unexpected direction. It turns out that the soldier's father and mother had come to see him, invited him to their hotel, and there...

"My father and I drank in the hotel that evening and I was ashamed to go to the unit. That's why I made my way to our construction site, entered the dressing room and fell asleep," Gritsay himself disclosed in an explanatory note. As sad as it may seem, the parents had prompted the soldier to violate military discipline and abuse alcohol.

This incident is of course an exception, but it isn't that rare for the parents of first-term servicemen to bring "symbolic" bottles to a meeting with them and to put alcohol in packages. Don't they really understand that drinking can lead to nothing good?

Military Traffic Inspector Abused

Moscow KRASNAYA ZVEZDA in Russian 25 Apr 85 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'Ambitions and Petitions'"]

[Text] That was the title of a critical article by Lt Col M. Lishniy published on 16 February. Col Justice V. Mel'nichuk, acting military procurator of the Group of Soviet Forces in Germany, announced that military procuracies had made checks of the facts cited in the article.

The military procurator gave a warning to Lt Col S. Sazonov, who permitted an unlawful arrest of a VAI [Military Motor Vehicle Inspectorate] inspector, about the inadmissibility of law violations.

Capt S. Zebrov, who insulted the VAI inspector, was given a severe reprimand.

The instance of a tactless attitude toward the duty inspector on the part of Lt Col A. Stolyarov received a fundamental evaluation at a service conference.

The military procurator made a representation to the chief of Garrison "X" in which he raised the question of imposing strict order in the operation of motor transport and in making officials who didn't fulfill the lawful demands of VAI inspectors liable for disciplinary punishment.

6904

CSO: 1801/216

GROUND FORCES

MINOR TECHNICAL PROBLEMS PLAGUE VEHICULAR MARCH TRAINING

Moscow KRASNAYA ZVEZDA in Russian 16 Mar 85 p 2

[Article by Col A. Lyunenko, senior officer, combat training directorate, Red Banner Carpathian Military District: "Test by a March"]

[Text] As is known, on exercises troops must accomplish various missions. But not one of them, whatever the problems which are worked out, can get by without a march. And it also happens that the ability of the personnel to displace in an organized manner under their own power becomes decisive at some stage. This also happened on the exercise which will be discussed.

In order to ensure the organized deployment and commitment to battle of the main body, the motorized rifle battalion under the command of Major V. Vasilenko which was operating in the forward detachment was to forestall the "enemy" come what may and seize a tactically advantageous position. However, as soon as terrain sectors difficult to traverse began to appear on the route of the motorized riflemen, reports of the lagging of vehicles began to arrive from the subunits. In which regard, stopping on narrow forest roads and openings, these vehicles often hindered the advance of the columns. It ended in the fact that the battalion was late in reaching the position and the main body had to enter battle under conditions which were disadvantageous for deployment.

Later, I had the occasion to hear various opinions in this regard. In particular, some of the battalion's officers believed that this occurred because of the difficult conditions under which the march took place. And actually, the conditions were, as they say, not of the best. It is not so simple to forestall the "enemy" in a movement on mountain-forest terrain where both the maneuver and control of the subunits are hampered.

Nevertheless, it was not the difficulties connected with the local conditions which were the main reason for the battalion's failure. The mission assigned to it was realistic and based on precise calculations. From the standpoint of normative requirements, the time allotted to the motorized riflemen was fully sufficient for them to accomplish it. With the stress corresponding to the moment and of course, the main thing--a conscientious attitude toward the matter.

But the attitude toward the matter could already be judged from the reason why some of the vehicles began to lag behind on the march. It turned out it was because the generator drive belts failed on them....

Here is the paradox which obtained. An entire motorized rifle battalion which, as is known, is a rather intricate technical complex, suffered failure in a training battle because of some kind of belt.... Isn't it vexing? All the more since each sufficiently trained driver knows how and what should be done to avoid something like this.

However, the motorized riflemen now must set their hopes only on themselves because, as was learned, prior to going out on the exercise no one seriously undertook checking the placement and tension of the belts or the adjustments necessary for their normal operation. All this was done, as they say, by eye. And meanwhile, somewhere in a warehouse special instruments intended for the adjustments gathered dust.

Unfortunately, various types of lack of coordination sometimes occur on a march due to carelessness and an unconscientious attitude toward the maintenance, operation, and servicing of equipment. The following example is instructive in this regard.

In the course of an exercise, the battalion under the command of Major V. Dvor-yadkin was to execute a march of many kilometers. Considerable effort was expended in preparing for it. However, the result again proved unfavorable. This time, through the fault of the specialists of the fuels and lubricants service. By their oversights, the wrong fuel was poured into the refuelling truck which was to be used to refuel the vehicles on the march. As a result, some of the vehicles could not continue to move after refuelling.

All this shows once again how urgent for us now are the questions connected with the improvement of the march training of subunits and units which, it goes without saying, is inseparable from the improvement of the personnel's technical training. Yes, an increase, let us say, in the speed and maneuver capabilities of equipment, the presence of attachable and built-in engineer equipment and navigation equipment in motorized rifle, tank, and other subunits of the Ground Forces--all this permits them successfully to accomplish movement on various terrain under their own power day as well as night. The range which contemporary equipment possesses gives them the capability to execute marches over large distances, which is of no little importance in connection with the enemy's increased capabilities to disrupt shipments by railroad and other types of transportation. But the increase in the technical equipping of the large units and units by itself does not solve the problems of march training. The constant and coordinated efforts of commanders and political organs, staffs, and party and Komsomol organizations are required here.

Of course, we also have favorable examples in this regard. In particular, the majority of the subunits of the Nth Tank Regiment have been distinguished by a high level of march training for a number of years. This is caused in large measure by the fact that here questions of its improvement are solved in combination with a rise in the overall technical style of the personnel. In which regard, this is done in a well-thought-out manner and with consideration of the trainees' individual features.

Let us say that young replacements arrived in the regiment and the corresponding work with them is organized at once. The specialists who arrived are given special attention. Each subunit commander and his technical deputy has a special notebook where a personal record of their training is kept, which permits organizing individual work with them more objectively. Specialists of the regiment's various services take an active part in the conduct of planned as well as supplementary lessons with the newcomers. The young soldiers are responding warmly, for example, concerning the lessons recently conducted with them by Majors V. Bakhilin and P. Vyshetravskiy and other experienced methodologists.

It is well-known that competition actively furthers an increase in the ability of the driver-mechanics of tanks and infantry combat vehicles and the drivers of wheeled vehicles as well as in the training of men of other specialties. Considering this the regimental commander and staff persistently see that each lesson leader is able to organize such competition. When summing up the results, it is mandatory to consider not only the progress of the specialists in technical disciplines and the results of their accomplishment of the standards, but also the condition of the vehicles which have been assigned to them. Such an approach to the matter contributes to instilling in the men a lofty sense of responsibility for the weapons and equipment entrusted to them and their readiness for combat employment.

In the complex of measures directed toward the improvement of the subunits' march training a special place is allotted in the regiment to the accomplishment of exercises in driving combat vehicles under various conditions. The staff monitors strictly to see that each lesson on driving takes place in a difficult tactical situation. In accomplishing various special situations, the specialists learn to eliminate equipment malfunctions in the course of a march and to use equipment to increase cross-country capabilities of vehicles and for self-extraction. All this, of course, contributes to a situation where in the majority of the unit's subunits the personnel are well trained in actions on the march under conditions where the enemy employs conventional as well as nuclear weapons.

At the same time, there are also shortcomings in the march training of the personnel in the regiment. And many of them, as analysis shows, are connected with gaps in the technical training of one or another category of servicemen. It happens that one or another subunit does not pass the test by march due to gaps in the professional training of the officers. Some of them, as winter combat training shows, have still not sufficiently mastered skills in the organization of a march in short times and the leading of columns at high speeds. Individual commanders of subunits which are displacing under their own power on exercises experience difficulties in the solution of problems connected with the organization of reconnaissance, engineer support, and the protection of the personnel and equipment against weapons of mass destruction.

Here those who organize the command training of the officers in the units and large units have something to think about first of all. One of the ways for a further rise in its effectiveness, in particular, is in bringing the conditions for the training of the officers as close as possible to the conditions under which they must operate in actual battle. It must be owned that the frontline experience is far from always actively used for these purposes. And it can

give much to commanders of all ranks in regard to the improvement of their practical skills, let us say, in the accomplishment of tasks for comprehensive support of the march as well as in regard to the organization of indoctrinal work directed toward instilling lofty moral and combat qualities in the personnel.

Field lessons and exercises with which the concluding stage of winter combat training is saturated also show that for the present not all officers are mastering to a sufficient degree the skills in organizing the servicing and repair of equipment under combat conditions. It is precisely this which is shown, for example, by the following incident which occurred on one of the exercises in the Nth Motorized Rifle Regiment.

During a march the commander of a battalion which was operating in the advance guard received a report from Captain N. Popel'skiy that several vehicles could not continue to move for technical reasons. The battalion commander ordered Popel'skiy to continue accomplishment of the assigned mission, hoping that the personnel of the battalion's maintenance tail would render the appropriate assistance to the drivers of the vehicles which had dropped behind. However, the maintenance tail led by the deputy battalion commander for technical affairs, Major A. Mitrofanov, proved to be unprepared for this. Moreover, convinced that after protracted repairs one of the armored personnel carriers would be unable to catch up with the column which had moved forward, Major Mitrofanov ordered the driver to move to the unit disposition area.

Clearly, this could occur where people were not accustomed to work under conditions approximating those of combat and did not realize the essence of such a concept as march discipline. And actually, as was learned later, in the named unit proper attention was not paid to training specialists in the driving of vehicles in columns in combination with the accomplishment of tactical missions and the procedures for the repair of equipment under combat conditions.

It should be assumed that the shortcomings in the march training of some subunits which showed up in the course of winter combat training will become a good lesson for commanders and staffs. At the same time, their elimination will also depend to a great extent on us, the officers of the district's combat training directorate. We see as our task the systematizing of the shortcomings noted in the course of check lessons and exercises, generating specific recommendations directed toward the improvement of the march training of the men of all combat arms, and equipping commanders of all echelons with advanced experience. And it convinces us: successes in march training are achieved where each movement to the field in dismounted formation or on vehicles and each tactical and marching-drill lesson and each exercise is used for its improvement.

6367  
CSO: 1801/179

GROUND FORCES

FIRE COORDINATION: ARTILLERY TOPOGRAPHIC SURVEY

Moscow VOYENNYYE ZNANIYA in Russian No 1, Jan 85 (signed to press 6 Dec 84) p 43

[Article by Col V. Knyaz'kov: "Artillery Odograph"]

[Text] The primary mission of the artillerymen is to conduct accurate aimed fire against the enemy. If everything is simple during direct fire--for it is as if the target is in the palm of your hand--it is much more difficult to fire from indirect firing positions.

Here it is necessary to compute firing data, solving the so-called artillery triangle: target (T) - observation post (OP) - gun position (GP). In which regard, first it is necessary to determine the coordinates of the combat formation (in this case, the GP and OP) with the required accuracy, which would guarantee the reliable destruction of the target. Or, as the artillerymen say, accomplish the "tie-in."

It is good if the coordinates are known ahead of time. And what if they are not? The dynamics of contemporary combined arms combat are such that the guns should open fire from indirect firing positions without delay. And here there will be no time to look for spot altitudes on the ground, for intersection using angle-measuring instruments, or measuring distances with a tape. This task is accomplished by artillery odographs, including the AT-ST.

Military specialists give it the following technical description: the AT-ST odograph is a tracked prime mover on which a set of navigation equipment instruments is mounted and which ensures the automatic determination of the coordinates of the points being tied in.

What is the essence of the odograph's automatic operation? We recall the traditional task: a vehicle is moving from point "A" to point "B"; let us assume that the coordinates of point "A" are known and the vehicle reached point "B" moving strictly along a straight line. Then the coordinates of point "B" are determined very easily from a right triangle which is constructed on a map. It is only necessary to measure the route covered between points "A" and "B" and to know one of the angles of the triangle.

However, in practice the vehicle does not go in a straight line alone. Turns, zigzags, and bends in the road are inevitable. In short, the entire route from

point "A" to point "B" will be curvilinear. What should be done? Specialists offered a way out: the entire route which has been covered is broken down into small segments in such a way that each of them proves to be a straight line. A large number of small right triangles is formed. Solving each of them, the coordinates of all intermediate points and, in the end, of point "B" can be determined. It is only necessary to know the length of the small segment and the corresponding angle.

The navigation equipment of the odograph also operates on this basis. Its component instruments measure the parameters of movement quickly and reliably and calculate the coordinates precisely. The route sensor, for example, continuously measures the value of the small straight segments which the specialists call the increments of the route which has been covered. The purpose of the gyroscopic course indicator, it is believed, is clear from its name. We recall that it is necessary to know the angle for the solution of a small rectangle. As applicable to a topographic map, this is the grid angle formed by the vertical line of the scale grid and the odograph's direction of movement. The course indicator exactly ensures the generation of the grid azimuth of the vehicle's direction of movement at each point in time.

A so-called course plotter is used as the onboard computer. In solving the next small triangle, it adds up the calculated coordinate increments with the coordinates of the preceding point, that is, it automatically generates the present coordinates of the odograph's position and, using a recorder, it draws the route covered on the map.

Such an original navigation apparatus permits using the odograph not only to determine the coordinates of the firing positions, but also to check approximately the tie-in accomplished on a geodetic basis and to lead troop columns at night or on terrain with a small number of spot elevations. Finally, the AT-ST is able to transport a section and unit of fire of artillery shells and to tow an organizational trailer.

Of the other instruments which are located on board the odograph, we will also name the sight, artillery periscopic aiming circle, and PNV-57 [night vision] instrument.

The sight is used to measure the angle between the vehicle's longitudinal axis and the direction to a reference point for the initial orientation of the odograph or to determine the grid azimuth of the oriented direction. An aiming circle is also used for this as an auxiliary instrument. The PNV-57 is an infrared instrument. It is intended for driving the odograph at night.

The combat capabilities of the AT-ST are very varied and sufficiently high. Let us take as an example the accuracy in determining coordinates of various points. Naturally, it depends on many conditions but, first of all, on the length of the route and terrain conditions. On the whole, it is characterized by the root-mean-square error which is equal to one percent of the route covered. Of course, if the odograph moves over broken terrain with slippery or loose soil, the error in determining the coordinates increases somewhat.

The performance data of the odograph which show its operational capabilities are also of interest for specialists. Thus, the average running speed of the AT-ST on dirt roads is 20-22 kilometers per hour. And the maximum speed on horizontal sections of a highway may reach 35 kilometers per hour. The angle of lateral stability of a fully equipped odograph is 25 degrees.

As regards trafficability conditions, they are characterized by the following data: the front or rear angles of trafficability can be no more than 35 degrees and the fording depth is up to 1 meter. The road clearance is 400 millimeters. The smallest turning radius is 5.7 meters.

We present only the most necessary of the weight and dimensional data. The total weight of a fuelled odograph together with the crew reaches 13 tons. The length of the AT-ST is 5970 millimeters, width--2600 millimeters, and height--2530 millimeters. The distance between the centers of the tracks (and for tracked vehicles this is nothing but the width of the track) is 1900 millimeters.

The odograph is serviced by the crew which is allotted no more than 15 minutes according to the standard to prepare the entire instrument set of the navigation apparatus for operation. It should be kept in mind that the AT-ST will not always be operated under ideal conditions. Therefore, for example, with the long stay of non-operating equipment under low-temperature conditions (below -30°) the time for its preparation for operation is increased to 25 minutes.

In conclusion, we note that the odograph has shown up well among the troops. With its use the artillerymen are accomplishing the assigned missions quickly, reliably, and accurately.

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CSO: 1801/179

CIVIL DEFENSE

TRAINING AT FUEL EQUIPMENT FACTORY EXAMINED

Vil'nius SOVETSKAYA LITVA in Russian 26 Feb 85 p 2

[Article by Col I. Ratkyavichyus, chief of staff, deputy civil defense chief, Vil'nius: "Universal Interest"]

[Text] It was not by chance that the fuel equipment factory was chosen as the place for the civil defense [CD] inspection. The enterprise has occupied first place in the Leninskiy Rayon of Vil'nius for state of civil defense for several years. The general director of the association, Al'girdas Antanovich Didzhyulis, and the secretary of the party committee, Gennadiy Semenovich Tarasov, regard CD measures with at least as much responsibility as production tasks. And they demand this from the entire collective.

...Having learned of the measure being planned at the factory, Al'girdas Antanovich sat silently for a moment, pondering. He, the leader of the biggest association in the city, has many duties, concerns, and alarms. And here it is also the end of the year. And of course, he is very worried about the production plan which must be accomplished whatever the difficulties. And accomplished for all indices.

And here the director pondered how to proceed so that production does not suffer and how better to prepare for the forthcoming measure.

The director's meditations were interrupted by a telephone call:

"Al'gidras Antanovich," an alarmed voice was heard in the receiver. "Here in our shop Nikolay Vasil'yevich Asyamolov is demanding that the formation commanders not be detained. But how can they be released if, you know yourself, it is the time.... What should be done?"

"As Nikolay Vasil'yevich requires. The forthcoming civil defense inspection is a very important measure...."

It was difficult for the director to withstand the alarm of the people and their concerns which were dictated by concern for production. Moreover, this was not the first phone call. Ten minutes earlier they had called from another shop and also reported with concern that they cannot replace the formation commanders who had departed for lessons on civil defense and the matter, they said, brooks no delay.

The director's first impulse was to go to the shop immediately so as to look into everything and even give specific instructions. But he had another thought: he should not do this. First, his good right arm was at the spot--the civil defense chief of staff N. Asyamolov. Second, let them think and decide themselves how to proceed in the situation which had developed. When a commander had been put out of action at the front, he was replaced by another and the attack continued.

...The hall of the factory was overcrowded. Familiar people were everywhere. Al'girdas Antanovich's work colleagues--directors of the majority of the city's enterprises--had arrived for the lessons. He told them in detail what had been done at the factory in creating a training-material base and in improving the training process. And then he invited the participants to inspect the factory.

It had something to tell and to show.

At the enterprise much has been done and even more is being done to improve civil defense. It has become an organic part of the collective's production life. All lessons with the workers, employees, and personnel are clearly planned by days and hours. The best trained technical engineering personnel and leaders of production subdivisions are designated the leaders of the training groups. There is also much that is favorable in the organization of socialist competition in civil defense. All shops and departments participate in it. Inspection-competitions are conducted periodically, let us say, for the best CD corner in the shop or for the best formation or training group. Moral and economic incentives to reward the leaders have been established. Thanks to the high effectiveness of socialist competition, the majority of the workers and employees have mastered profoundly the principles of protection against contemporary means of destruction and are confidently accomplishing all the standards which have been envisioned. In the socialist competition, first place is being held by the collectives of the shops headed by communists Vyacheslav Georgiyevich Shapovalenko and Aleksandr Fedorovich Artayev.

At the factory, a good training-material base has been created which meets civil defense requirements. There is a training area with special classrooms. This permits instructing the supervisors, workers, and employees visually, practically, and to the full extent of the programs.

At the factory in recent years, they have begun to practice widely lessons directly on the ground, in the field, and on the training grounds of the Leninskiy Rayon which are located near the enterprise. And this, as experience shows, is the best method of instruction. Special attention is devoted to the composite team which should begin to combat the elements or a production emergency ahead of the others. In addition, it must operate not only on the territory of its own factory but can be sent to another object of the city at any time, day and night.

A special tactical exercise which was conducted recently was a genuine test for the composite team. "Serious destruction" of the production buildings occurred and "fires broke out" at the facility where, according to the special situation, the "enemy" employed conventional means of destruction.

As soon as he received the special situation the commander of the composite team, A. Petkyavichyus, sent scouts out to the stricken area and himself summoned the commanders of groups and units and assigned them the mission--and the team moved to the stricken area. The fire engines also rushed there. While directly on the way the duty crew managed to put on the special protective suits. Elimination of the "obstruction" was begun using bulldozers, excavators, and truck-mounted cranes. The medical aid team headed by the commander, V. Vaychylite, and the deputy, M. Bal'tsukevich, operated smoothly in rendering first aid to casualties.

...And we again continue the conversation with the association director, A. Didzhyulis. We again return to the problem of how to make production interests compatible with civil defense. Doesn't it interfere in this matter?

"Today I was convinced again and again," says A. Didzhyulis, "that the lessons, inspections, and exercises provide people not only with knowledge and skills, but they unify them and raise discipline, will, steadfastness, and moral and psychological tempering. And this has a favorable influence on the productivity of labor."

Of course, it is beyond the capability of the director alone, with all his energy and desire, to solve all civil defense problems. And nevertheless--which is very important--Didzhyulis has his own, interested attitude toward this troublesome and multi-faceted work. Naturally, the director relies on his first assistants in everything--the chief of staff, Nikolay Vasil'yevich Asyamolov, his deputy, a veteran of the Great Patriotic War, Nikolay Alekseyevich Baranov, and people with a wealth of life's experience.

Yes, much is being done at the factory to improve civil defense. Such persistent daily and, most important, purposeful work will also bring success.

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CSO: 1801/179

DOSAAF

ESTONIAN DOSAAF CHIEF ON PRE-DRAFT TRAINING

Tallinn RAHVA HAAL in Estonian 22 Feb 85 p 2

[Article by Heino Jogi, deputy chairman of the Estonian SSR Central Committee of DOSAAF, under the rubric "Reply By": "How Does DOSAAF Train the Supplement for the Armed Forces?"]

[Excerpts] The present time has set for the training of technical specialists weighty tasks. Recently a new DOSAAF driving school became operational at Kohtla-Jarve. Last year the majority of DOSAAF education establishments and clubs succeeded well with the fulfilment of the adopted socialist commitments, whereat the work indices of the Parnu and Tartu driving schools and of the DOSAAF Tallinn naval school and radio engineering school are worthy of being singled out.

The defence of the state month has again enlivened the work of DOSAAF primary organizations. In our republic there are 2,056 of them at present, with 585,000 members. In recent years the military-patriotic activity in the upbringing of workers, especially of young persons, by means of the Soviet people's labour and combat traditions has become more active at many primary organizations. Good experience in this has been accumulated at the Kalinini rayon. A commission has been formed there which directs the military-patriotic undertakings organized there. Under the leadership of party committee and Soviet organs noteworthy advances have been made by DOSAAF Tallinn and Kohtla-Jarve town committees, Tartu, Viljandi, Harju and Khotla-Jarve rayon committees, whose achievements are based on an extensive inclusion of workers in the defence of the state work.

The Communist Party has given the DOSAAF the task together with Komsomol and trade union organizations continuously to develop the defence of the state sports work. Flourishing of technical and military/applied types of sports has become one of the component parts of the upbringing work to be done among the young people. At present close to 25 percent of DOSAAF members are engaged in technical sports. There are still no grounds for satisfaction with the general situation of technical sports. Slack work and poor material basis of sections of technical and military/applied types of sports at many enterprises and schools is condemnable. Several types of technical sports have not found a worthy place in all-Union advancement tables.

The DOSAAF rayon and town committees have to care continuously for the dissemination of the best experiences and for raising the qualification of activists. Until now there are shortcomings in this respect both in Paide and in Haapsalu rayon DOSAAF committees. Because of that there are several poor DOSAAF primary organizations in these rayons. We regard as meagre the role of DOSAAF committees of Hiumaa, Kingissepa and Jõgeva in the propagation of the Soviet officer's honourable vocation at schools with Estonian instruction language.

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FOREIGN MILITARY AFFAIRS

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British MCV-80 Infantry Fighting Vehicle * American A-4 SKY HAWK Strike Aircraft * Section of British HAWK Trainer Aircraft * American KIDD-Class Destroyer CALLAGHAN (DDG-994).
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## SWISS CIVIL DEFENSE SYSTEM DISCUSSED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 31-32

[Article by Col (Ret) V. Emel'yanov; "Swiss civil defense"]

[Text] As reported in the foreign press, the Swiss ruling circles, while adhering to political neutrality, are strictly following, in their practical activity, as their basic position, a doctrine of "total defense. The doctrine's main goal, in their opinion, is achievable by instituting a system of measures having a military-political character, suitable for training the country's civil sector for survival under modern war conditions. The civil defense system called for solving the problem of survival and therefore special attention is paid to its perfection. Foreign specialists believe that, on the level of this system's development, Switzerland occupies one of the top places among capitalist countries.

The construction of the country's modern civil defense system is in accordance with a 1963 federal law on civil defense and its addenda and also with a government document titled "Civil Defense Concepts, 1971." In them, civil defense tasks are defined as "a complex of actions, planned and organized in advance, directed at saving peoples' lives and property and for the preservation and restoration of the necessary services under emergency conditions resulting from war." Basic goals were also formulated and the foregoing system was established for their achievement.

First of all, civil defense is activated in the event of military operations or for any national calamity to ensure the survival of as large a part of the population as possible, thereby creating the necessary pre-requisites for the restoration and development of industry and for the continuation of the Swiss people. Additionally, it, together with other state and private services, is designed to render help to the population during national calamities, catastrophes to transportation, damages to enterprises, etc. and also for taking part in the elimination of their after effects.

"Civil Defense Concepts, 1971," is a long-range document which defines its development and perfection in the period to 1990. Attached to it is the condition that every Swiss citizen must be provided a place in a shelter against atomic bombs. By the end of the 80s, it is stipulated to bring the

total capacity of public nuclear shelters to 10 million places (the assumed population in 1990). According to Western press evidence, thanks to the timely apportionment by the federal government and the cantons' governments of the necessary financial resources, this program will be successfully implemented. Thus, in 1982, the total capacity of nuclear shelters in the country comprised more than 5 million places which ensured accomodating in them more than 70 percent of the inhabitants.

Evacuation was never developed as one of the civil defense means for saving the population. By military specialists' estimate, the country's small territorial size and the chiefly mountainous character of the terrain, almost completely excludes the possibility of conducting mass evacuation of the urban population. In accordance with the document "Civil Defense Concepts, 1971," only "vertical evacuation" is considered, that is, protecting the population in shelters is, under Swiss conditions, recognized as the most effective way of ensuring the survival of the population.

Along with the creation of the various protective buildings, great attention is being paid to other components of civil defense: the development of warning and communications systems, radiation reconnaissance and detection, the construction of protected control posts and warehouses for material-technical supplies with the necessary reserves of material resources, medical supplies for the population under emergency conditions, and the training of civil defense formations and self-defense detachments.

According to foreign press data, in the Swiss civil defense system, in 1982, there were: 1,000 protected control posts, 570 warehouses for material-technical supplies, 97 protected hospitals with surgical teams and infirmaries for 78,000 beds, 279 protected medical posts, 715 first aid stations, and 57 civil defense personnel training centers. Of the 520 thousand persons who serve in the system, 300 thousand have received special training.

Recently, more than 400 million Swiss francs (approximately 50 francs per capita) has been spent annually on the country's civil defense and more than one-half of that sum was earmarked for the erection of the protective buildings and the remainder was for the purchase of material-technical resources and also personnel training. The total expenditures since the program began, have exceeded 5 billion Swiss francs. It is noted in the Western press that, by the level of annual expenditures on civil defense goals, on a per-capita basis, Switzerland significantly outstrips the leading capitalist countries. Thus, the French spend 6.6 dollars, the British, 1.8 and the Swiss, 29.

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FOREIGN MILITARY AFFAIRS

ACCUSATIONS CONCERNING U.S. CHEMICAL WEAPON PRODUCTION AND USE

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 14-19

[Article by P. Filippov, professor: "American Imperialism's Preparations for Chemical War"; passages rendered in all capital letters printed in boldface in source]

[Text] Important events took place in the international arena in the 1970's. As a result of the heroic struggle of the Vietnamese people with the support of peace-loving forces, the USA was forced to stop continuing its aggression and, in 1972, pulled its army out of Southeast Asia. American imperialism's war against the peoples of Vietnam, Laos and Kampuchea, conducted with the most barbaric methods, ended in ignominious ruin. It was a chemical war that was unprecedented for how long it lasted, for the amount of toxic substances employed in it, for the number of victims of chemical weaponry, and particularly, for the serious long-term effects on the population's health and on this region's environment.

The indignation and angry protest by all progressive and peace-loving forces forced the U.S. administration--even though five years late--to ratify the Geneva protocol of 1925, to prohibit the use of toxic substances in war. Furthermore, the White House could not evade the talks concerning the complete ban of bacteriological and chemical weapons and, in 1975, ratified the convention to prohibit the development, production, and stockpiling of biological (bacteriological) and toxic weapons supplies and to destroy them. One of the points of this agreement obliged the nations signing the convention, to make an effort to come to an accord on the complete ban of chemical weapons. Positive gestures were observed. In particular, international and bilateral agreements were concluded between the USSR and the USA on arms control and on problems dealing with war and peace.

In 1975, the Saigon regime was destroyed and the people of South Vietnam celebrated victory. After that, the patriotic forces in Laos and Kampuchea achieved success and the April revolution took place in Afghanistan. The liberation movement gathered strength in Africa and Central America. Military circles in the West certainly did not arrange such a development in events. They were in conflict with the long-term plans of the military industrial complex of the USA and the North Atlantic bloc to attain world domination.

However, imperialism has been able to gather its strike forces to engage in the development and carrying out of its sinister plans for a new "cold war" against the nations of the socialist fraternity and a number of the non-aligned states. The kind of "cold war," which has been developing in recent years, is now not only not calming down, but, on the contrary, is taking on even more dangerous forms and is taking on all manner of aspects: ideological, economic, and military.

In the area related to problems of chemical weaponry and its prohibition, Washington has instigated its unseemly activity in three key areas. First, high ranking officials in the American administration have bent over backwards trying to dress themselves in the toga of peacemakers, lining up behind the advocates of chemical disarmament. Second, the State Department, Pentagon, secret services, and mass information resources engage in a foul diversion; they spread slanderous fabrications on how incidents took place where chemical and toxic weapons have been deployed in Southeast Asia and Afghanistan with the Soviet Union in complicity. Finally, the USA has openly, on an unprecedented scale, engaged in a program of chemical arms buildup and rearmament, spending more than one billion dollars a year in the preparations for a chemical war. All of these kinds of activity have taken on a particularly dangerous character after R. Reagan, the representative of the ultraright militarist circles of the USA, came into the White House.

THE HYPROCITES FROM WASHINGTON. Representing the American proposal for the convention of chemical warfare at the Geneva Disarmament Convention, Vice President G. Bush said on April 18, 1984, that this "recent expression of American decisiveness" forbids the possession, production, acquisition, storage or transfer of chemical weapons. The leaders of the U.S. administration now without remorse, but not while toxic substances were used in Vietnam, recall the words of F. Roosevelt that the use of chemical weapons "is decidedly outside the realm of the common law of civilized man." The creators of the draft for the convention have hypocritically announced that the current U.S. leaders allegedly consider chemical weapons to be "unconscionable" and that "for the sake of all humanity" are trying to "completely eliminate the possibility of using toxic substances in the form of weapons." This was written into the preamble of the convention draft. But right in the first article it states that the United States is not attempting to forbid herbicides to get rid of plant matter and poisonous irritants.

Mankind has still not forgotten that these two groups of toxic substances were widely used by the American aggressors against Vietnam, Laos and Kampuchea from 1961 to 1971. For example, more than 90,000 tons of herbicides and more than 7,000 tons of CS-type poisons were dropped on the territory of South Vietnam alone.

The "peacemakers" from Washington are trying to get out of prohibiting military herbicides and irritants by making reference to the necessity of using some of them in the interests of the national economy and to combat disturbances. Irritants are actually used by the police in Western countries to disperse antiwar and other demonstrations. What else can one classify aviation bomb cassettes loaded with CS, which were so widely used by the American aggressors against the patriots of South Vietnam, other than as

chemical weapons? There is no way that artillery projectiles and missile warheads loaded with CS can have a peaceful purpose.

The ingredients for CS-1 and CS-2 were specially designed in the U.S. for use in Southeast Asia, where tens of thousands of tons of them were scattered over the territory of Vietnam. A suspension for CS was also manufactured just for the Pentagon and was then sprayed from airplanes and helicopters. Capable of being used in substantial quantities simultaneously over an enormous area in great concentrations, this irritant kills people by burning the lungs and paralyzing breathing.

The fact cannot be avoided that irritant-type poisons are still being employed as weapons. The Pentagon's arsenals have selected and tested them. Military chemists are continuing to seek out new irritants. There are reports that the U.S. Defense Department is interested in a new irritant, CR, which is several times more toxic than CS. According to official publications by the American Congress, the Pentagon is developing military chemical formulas that will use irritants along with neuro-paralytic toxins. Such compound formulae are far from being intended for peaceful purposes.

Herbicides can never be identified as having both a peaceful and military purpose. Depending upon the kind, they display characteristics of a sometimes contradictory nature. Military herbicides are prepared from substances that act not so much on weeds as they do on cultivated plants. They are intended not to weed sown fields and planted areas, but to destroy harvests of grains, vegetables, and industrial crops or forest plant life. The Pentagon sets no limits on the toxicity of herbicides to people and animals. This has led monopolies, interested in enormous profits, to not bother themselves with the need to clean up herbicides and to get rid of toxic compounds. As a result, the American troops in Vietnam used, among a number of herbicides, several hundred kilograms of the very toxic and insidiously poisonous dioxin, which has had the most serious, protracted consequences on the health of people. For military purposes and none other, the Pentagon has developed and widely used an "agent blue" formula containing arsenic. It has been noticed that fields that have been put back into cultivation after being subjected to it, will produce in subsequent years, harvests infected with arsenic. Therefore, arsenic-containing formulae are not used in agriculture. Even those herbicides which can be used for peaceful purposes, in their military application, will come in dosages ten times greater. The level of such dosages has been established as a result of real-life testing. American military instruction manuals order herbicides to be used for the destruction and not the protection of cultivated plants.

When used en masse, both irritants as well as herbicides intended for military use display the inhumane properties characteristic of military toxic chemical agents. The U.S. experience of chemical war in Vietnam showed that these two groups of toxic substances, in the hands of the aggressor, accomplished their role as weapons of genocide and ecocide. Hence, it is not incidental that in U.N. General Secretary U. Thant's report, "Chemical and Bacteriological (Biological) Weapons and the Consequences of their Possible Use" (1969), prepared by a group of leading world specialists and scientists, irritants and herbicides are counted as destructive agents that fall under the category of

chemical weapons. The World Health Organization takes the same position on this issue.

Fixed on the idea of not categorizing irritants and herbicides as chemical weapons, the Reagan draft of the convention strays far from "peace-loving" objectives. Were this variant of the convention accepted (banning chemical weapons that do not extend to these two groups of toxic substances), it would legally justify the U.S. chemical war in Southeast Asia in 1961-1971, and would make a mockery of the memory of the victims of the peoples in this region.

Acceptance of the convention on chemical weaponry in the Reagan administration's edition would mean not a ban, but rather a legalization of new wars using resources of mass destruction. The "pacemakers" among the militarist circles in the U.S. would manage to win themselves the "right" to play out the Vietnam variant of chemical war in Central America and South Africa, in the Near East and even in Europe. Progressive forces all over the earth feel that this should never be allowed.

The American draft of the convention, from the first down to the last phrase, lays stress on the measures and forms of control to be observed by the participating states. As such, it proposes controlling some kinds of banning activity that would even infringe upon the sovereign rights of these nations, and it leaves other kinds without any controls whatsoever. For example, it envisions that only production controlled by the state will be inspected. In keeping with this, the U.S. is opposed to any kind of control over production that belongs to private firms and multinational corporations.

By artificially setting up obstacles in control organizations, the White House is pursuing three objectives. The chief one is to avoid any kind of new agreements to ban chemical weapons. The second one is to undermine the Geneva Protocol of 1925, and the biological convention of 1972, since they do not fit within the American model of control. The final one is to retain U.S. superiority and privileges in the event an agreement seems achievable. By placing impediments in the way of achieving an agreement on the complete ban of chemical weapons, the American administration does not intend to tie its hands in the preparation for war and in an arms race bent on achieving military superiority over the USSR.

THE UNBRIDLED LIE. Right after the US proteges were thrown out of Laos, the Western press came out with "reports" of the use of chemical weapons against the Mong bands of General Vang Pao. Such reports began being publicized right after the expulsion of the Pol Pot supporters out of Kampuchea. The lie regarding the use of chemical weapons in Afghanistan started to spread right after the April Revolution was victorious. This was a planned, U.S.-directed, slanderous campaign which was in pursuit of several objectives. The first was to deflect society's attention away from the consequences of the real chemical war by the U.S. in Vietnam, Laos, Kampuchea, and in this way more quickly overcome the shock caused by the downfall of this adventure. The second was a way to fabricate falsifications to slander the Soviet Union on a massive scale and thereby weaken the strength of its peaceful initiatives directed at averting war and developing good-neighboringly, friendly relations among states.

Finally, these falsifications and slander would be used, if not to justify, then just to cover up the speeded-up development of new kinds of chemical weapons in the U.S.

High ranking figures in the American administration are taking part in the slanderous campaign. The State Department has disseminated two reports in the U.N. on the imaginary chemical war in the Southeast Asia and Afghanistan. The U.S. Government's Permanent Representative at the U.N. has transmitted several notes with analogous content to the General Secretary. The U.S. Congress has organized "hearings" in which personalities have testified who were appointed to make up fabrications.

Under pressure by the American delegation, the General Assembly of the U.N. decided to create a group of experts to investigate instances where chemical weapons were supposed to have been used. Tests on plant matter, water, soil and equipment items infected with microtoxins supposedly from Laos, Kampuchea and Afghanistan were started. To prepare these phony tests in Thailand on the border with Laos and Kampuchea, an American colonel, Amos Townsend, was put in charge. In the past he has worked at Fort Detrick, the key center in the U.S. for the development of bacteriological and toxic weapons. From 1969-1971, he was to be found on American Air Force bases in Southeast Asia from which combat sorties were dispatched with aircraft loaded with herbicides and CS receptors. The Western press reported that Townsend secretly tested toxic receptors on Vietnam, and turned the results of their employment on the troops and population of South Vietnam. Specialists from Canada and other countries visited Thailand and Pakistan, supposedly to make private inquiries.

What did these investigations conclude? No real evidence of the use of chemical and toxic weapons whatsoever was revealed. The group of experts from the U.N. ascertained that the "victims" of chemical attacks presented to them, in fact, suffered from skin and other maladies common to this region. In their report, the experts noted that both the "victims" themselves and the case histories of their illnesses are phony. The Canadian military doctors who visited Thailand accordingly announced that the "victims" of imaginary chemical attacks presented to them by A. Townsend had been shot, several hours before the meeting, with an enormous dose of atropine, which drove them into psychological derangement. This was done to demonstrate the "facts" on the use of psycho-chemical poisonous substances.

Townsend's team was also sent out to analyse from the specimens they gathered what toxic ingredients they were supposed to contain. Scientists from Australia and Great Britain stated that they had no toxic ingredients whatsoever but in the end turned out to be excrement. P. Robinson from Great Britain, M. Mazelson from the U.S. and other Western scientists repeatedly showed the complete contradiction between the evidence presented by the State Department and the scientific data. The detail of scientific analysis of all the pseudo-evidence presented in the U.S. State Department reports of every kind was given by the experts to competent Soviet organizations.

THE MILITARY CHEMICAL BOOM. With the Reagan administration's arrival into the White House, a real military chemical boom commenced in the country. The U.S.

president announced that chemical weapons meet America's national interests. Monopolies conducting research and development on new chemical agents and ammunition for them received a lively dumping of dollars from the safes of the Pentagon. The head of the Laboratory for Chemical Systems (transformed into the U.S. Army Center for Chemical Research and Development), Col. V. Castenmeyer wrote in one journal that the scientific research work of his facility is devoting primary attention to developing new toxic chemical agents to be introduced into future operations. He confidently announced that in the 80's he expects "the appearance of interesting new ideas and opportunities to strengthen the nation's potential in the field of chemical weaponry."

Even during the American aggression in Vietnam the attention of specialists was focused on the idea of creating binary chemical weapons. In and of themselves they are simple: instead of a finished toxic agent produced at the factory, the munitions will be loaded with two semi-finished products of synthesis (precursors) and as a result of the interaction of the two, a corresponding substance is formed. The idea has been proposed to also have trinary chemical weapons. Hence, binary technology represents a final stage in obtaining a military toxic agent that can be transferred from the factory reactor to the munition body and turn it, in essence, into a miniature chemical reactor.

It is conjectured that the idea of a binary chemical weapon was born, as American journals write about it, as a result of efforts by the Pentagon to arm naval vessels with chemical weapons. It is considered that having toxic agents aboard ship is dangerous even during normal situations, since all ammunition leaks a little through welded seams and through condensation, which, nevertheless, can be quite sufficient to create dangerous concentrations in combat posts and other places where the crew may assemble. The probability of poisoning increases immensely with fires, being hit, etc. This also applies to transport vessels used to deliver chemical weapons to overseas theaters of military operations. The creation of new toxic agents also frees one from having to conduct labor-intensive and costly operations to get rid of obsolete or defective unitary fillings, which is what the Pentagon ran into in the 1970's. With these [new] weapons, American strategists are now tying together far-reaching plans whose fulfillment does not even hinder the achievement of an international agreement banning the development and production of chemical weapons.

The English chemical specialist P. Robinson noted in 1984, that binary technology allows the very same product to be obtained from differing semi-products of synthesis (precursors), and vice versa, in the same munition it has now become possible to obtain a whole series of structurally-related compounds by switching one precursor with another which is a widely distributed product for peaceful use. For example, such precursors can be any single-atomic alcohol for the binary synthesis of sarin analogs.

In 1978, the U.S. put a 155-mm artillery projectile with a binary sarin into service. In subsequent years, development on the "Big Eye" aviation bomb and a 203.2-mm projectile with a binary VX-2 was completed. The construction of a factory to produce binary chemical ammunition at the U.S. Army arsenal in Pine Bluff (Arkansas) is in the completion stages, making it one of the largest

centers in the U.S. for the production and storage of chemical and bacteriological weapons. Its estimated output is up to 70,000 rounds a month. It ought to be noted here that the cost for a single 155-mm projectile, with a binary sarin, is 650 dollars, and a "Big Eye" bomb with VX-2 costs 40,000 dollars. A secondary function of this factory will be to manufacture binary-type toxic chemical agents for rocket projectile warheads, as well as medium range ballistic and cruise missiles currently being deployed in several NATO countries.

A multi-year program on the development of new toxic chemical agents with intermediate volatility has been completed. The Pentagon has been working to obtain a toxic chemical agent that is more volatile and toxic than VX and received the acronym IVA. It is considered that it will be used only in the form of binary munitions and will reach the target through artillery, aviation, and missiles.

In the laboratories of military departments, universities and industrial firms in the United States and their allies, unceasing search for new, even more toxic chemical substances that have a more destructive effect on people is continuing. Like any other military chemical boom, the owners of firms and laboratories have the opportunity to extort enormous sums from common taxpayers.

By creating new kinds of chemical weapons, the U.S. is keeping inviolable enormous supplies of highly toxic neuro-paralytic chemical agents (55,000 tons) and 150,000 tons of chemical munitions: more than 3 million rounds, tens of thousands of aviation bombs, hundreds of thousands of mines, and a lot of other chemical munitions. Furthermore, the modernization of existing production is being brought about by replacing older technical equipment with modern. On Johnson Island in the Pacific Ocean, the Pentagon has created a factory to do technical servicing and repairs on chemical munitions. The U.S. Congress has allocated arsenals supplementary appropriations to repair and improve chemical weapon storage.

At the present time, the U.S. Army has in service all known especially toxic substances--from mustard gas and phosgene used in the First World War, to sarin and neuro-paralytic VX obtained during the Second World War and in the post-war period.

Supplies of toxic chemical agents are stored in 11 army warehouses and in arsenals located in the U.S. Furthermore, there is an enormous warehouse on Johnson Island in the Pacific Ocean, whose deadly production is aimed against the peoples of Asia, Central and South America. For example, as a result of monstrous experiments conducted by American imperialism last October in Northeast Brazil, some 7,000 persons died, two Indian tribes were annihilated completely, and toxic chemical receptors affected more than 2,000 square kilometers of forest tracts.

Less than a month ago the whole world was shaken by the news of the tragic events in India. The American concern "Union Carbide" made use of a chemical plant it owned in Bhopal to conduct research of military significance. A large scientific research facility operated here that consisted of five

laboratories, which did experiments to obtain new chemical compounds and tested them on plants and animals. It is not accidental that right after the catastrophe at the facility which took more than 2,500 human lives, a number of experts on chemical weapons from the NATO countries rushed to Bhopal.

According to reports by the Western press, the Pentagon has chemical weapons warehouses in the FRG (Hessen, Rheinland-Pfalz, and Baden-Wuertemberg) where upwards of 4 million litres of neuro-paralytic toxic chemical agents are packed in munitions. According to calculations by foreign specialists, American warehouses store enough toxic chemical agents so that every inhabitant on the planet will get 2,000 deadly doses of it. A member of the House of Representatives from the state of New Jersey, M Roukema, declared: "We have enough supplies of deadly chemical munitions to conduct at least a 30-day chemical war which will lead to millions of victims among the civilian population."

However, American obscurantists think these resources are too few. At the present time, there are five enterprises in the U.S., subordinate to the Pentagon, that are completely ready to resume the production of toxic chemical agents. Factories in Muscle Shoals (Alabama) and the Rocky Mountain Arsenal (Denver, Colorado) built in the early 1950s, are capable within the course of one year of producing up to 40 thousand tons of sarin and loading it into millions of chemical munitions. The Newport Military Chemical Factory (Indiana) built in 1958, is capable of synthesizing more than 5,000 tons of type VX toxic chemical agents and annually load them into hundreds of thousands of projectiles, thousands of warheads for medium-range missiles and tens of thousands of aviation bombs. Mustard gas and phosgene factories are retained in the Pine Bluff Arsenal and on the grounds of the Aberdeen Proving Ground (Maryland). The production of military herbicides and irritants is concentrated in the enterprises of private firms and corporations.

The facts which have been presented here witness the fact that the "peacemaking speeches" by figures in the American administration cater exclusively to propagandistic purposes in the hope of gaining political capital. In reality, activity has never ceased in the U.S., both in creating new kinds of toxic chemical agents, as well as in finding other directions to prepare for a large-scale chemical war that will threaten the very essence of earthly civilization. Many politicians, not only in other countries, but even in the United States, understand this.

A member of the House of Representatives from the state of Connecticut, William Ratchford, stated in April 1984, "The President (he has R. Reagan in mind) is calling upon the United States to lead the effort to obtain an international agreement on banning chemical weapons and, at the same time, he is insisting that the Congress allocate additional appropriations for lethal gas. It's hard to imagine anything more contradictory."

The USSR is taking a logical, principled approach towards the question of a complete ban of chemical weapons. "The Soviet Union has long ago proposed outlawing chemical weapons and pulling them out of nations' arsenals," announced K.V. Cernenko. "We are ready to solve this problem on a global scale as well as in installments." Taking into account the positions of the

participants in the joint talks by the USSR and its allies in the Warsaw Pact, a draft on the basic positions on the convention was drawn up that contained important points which touch on the extent of the ban and control measures and which constitute a good basis for future understandings.

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FOREIGN MILITARY AFFAIRS

U.S. GROUND FORCES NUCLEAR SUPPLY SYSTEM DISCUSSED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 33-36

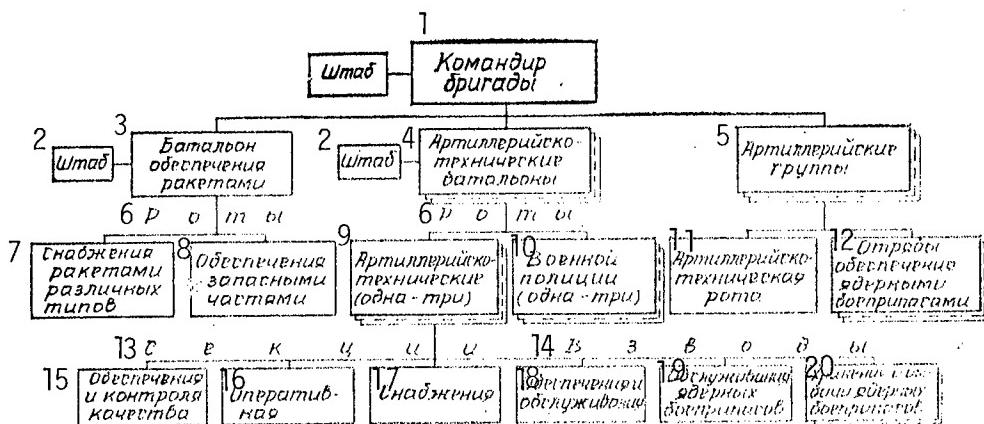
[Article by Col N. Tsapenko, candidate of military sciences, docent; "Supplying U.S. Ground Forces with Nuclear Weapons"]

[Text] In conducting intensive preparation for war, U.S. imperialist circles openly announce their intention to employ nuclear weapons during future combat operations. At the present time, in Western Europe alone, judging by foreign press information, there are about 7,000 nuclear weapons which are specified for use by all branches of the armed forces, including the ground forces of both the U.S. and the other countries of the aggressive NATO bloc. In connection with this, the U.S. Army command is working out, in detail, all aspects of nuclear munitions handling, including the question of supplying their own and allied forces with nuclear weapons. Thus, American specialists developed a typical scheme for supplying ground forces with nuclear weapons, which, in their opinion, is applicable in any TVD and during any type of combat operations.

As noted in the foreign press, the artillery-technical brigade is concerned with the storage of nuclear munitions, accounting for them, servicing and delivering nuclear weapons to individual units for employment in the TVD. Its composition can vary, depending on the character of the TVD, the availability in it of forces and resources, including the means for nuclear weapon delivery. For the timely supply of nuclear munitions to the formations and units, the brigade staff turns to a ground forces staff or the joint command's representatives, through whom the questions of providing appropriate units with nuclear munitions are coordinated.

A brigade's organization plan can include a missile supply battalion, artillery-technical battalions (reckoned on the basis of one per U.S. Army Corps per TVD) and several artillery groups for supplying U.S. bloc allies, operating in that TVD, with nuclear munitions.

A missile supply battalion is concerned with storage, repair and supplying formations and units of U.S. ground forces with missiles, less warheads. It is comprised of three missile supply companies and one for supplying reserve units to it.



### Organization of a U.S. Artillery-Technical Brigade

- |   |   |
|---|---|
| 1. Brigade Commander                    | 11. Artillery-Technical Company             |
| 2. Staff                                | 12. Nuclear Weapon Detachment               |
| 3. Missile Supply Battalion             | 13. Sections                                |
| 4. Artillery-Technical Battalion        | 14. Platoons                                |
| 5. Artillery Group                      | 15. Quality Control Section                 |
| 6. Companies                            | 16. Operations Section                      |
| 7. Various Missile Types Supply Company | 17. Supply Section                          |
| 8. Spare Parts Company                  | 18. Supply and Service Platoon              |
| 9. Artillery-Technical Company          | 19. Nuclear Weapon Service Platoon          |
| 10. Military Police Company             | 20. Nuclear Weapon Storage and Distribution |

An artillery-technical battalion is responsible for the introduction, storage, service and transport of nuclear munitions to U.S. Army Corps nuclear weapon supply units, and also carries out equipping regions for stockpiling. It consists of a headquarters component, one to three artillery-technical companies and the same number of military police companies.

The staff plans and organizes the work of all subunits providing nuclear weapons to army corps formations and units. For this purpose, under the corps' military operations control center, a nuclear munition supply group is established which coordinates all questions connected with the execution of given missions.

The artillery-technical company is intended to supply nuclear weapons to army corps formations and units, special engineer subunits and other units located in the region of deployment, or in its combat operations area. American military specialists calculate that each army corps will be provided two companies. It is proposed to deploy a third [company] in the communications zone for servicing the region for unloading transport aircraft delivering nuclear munitions from the U.S. or else for loading areas during their [nuclear weapons] evacuation. This same company supplies nuclear munitions to special units and subunits located in the corps' rear.

A company comprises a company command element, three to four platoons (one supply and service, one for maintaining nuclear munitions, and one to two for storage and distribution) and also three sections (maintenance and quality control, operations and supply).

In the maintenance and service platoon, there are two sections: service and maintenance. The first is concerned with servicing the company's technical resources, and the second is intended for maintaining the subunit's engineer equipment, wheeled vehicles and special equipment.

The nuclear munitions service platoon includes service and calibration sections. The first services nuclear munitions and trains the forces' instructors. The second services, repairs, calibrates and modifies electrical and electronic instruments and their special equipment.

The storage and distribution platoon carries out the functions of receiving, storing and distributing nuclear munitions.

The maintenance and quality control section handles authentication, servicing and repair of nuclear munitions in order to ensure the guaranteed explosion and planned nuclear yield at the target.

The military police company is charged with protecting nuclear weapons. As a rule, it is co-located with the artillery-technical company. Its functions include protecting nuclear munitions at all stages of handling, selection of personnel and their access to documents and equipment, and providing communications security, and verifying outgoing information. Additionally, specially chosen ground force subunits can be used for providing nuclear munitions' security and storage.

Besides the above-mentioned subunits, several ARTILLERY-TECHNICAL GROUPS, for providing nuclear munitions to nuclear weapon supply units of U.S. allies operating jointly with American forces in the TVD, can be included in the artillery-technical brigade. It is proposed to include in the composition of such groups, an artillery-technical company and several nuclear munitions supply detachments. The company's missions include the storage and maintenance of nuclear munitions earmarked for selected allies. The number of personnel and quantity of equipment in the company depend upon the mission being executed. As a rule, nuclear munitions maintenance detachments are assigned to units supplying nuclear weapons which are envisioned to be used for nuclear strikes during the conduct of military operations. The detachments' missions include storage, distribution and making nuclear munitions ready for use.

In the American regulations, it is noted that, for supplying nuclear munitions to U.S. ground forces and their allies in the NATO bloc during combat operations, it is envisioned to establish field stations for supply and storage. In peacetime, nuclear munitions are located in fixed depots and are serviced by appropriate artillery-technical brigade subunits.

As reported in the foreign press, in a threatening period or with the commencement of combat operations, artillery-technical companies establish nuclear munition FIELD SUPPLY POINTS (PPS), and also FIELD STORAGE POINTS (PPKh), created to disperse and replenish nuclear weapon supply units with nuclear munitions. All PPS and PPKh resources, including even nuclear munitions, can be located in special vehicles which, in American military specialists' opinion, shortens the time for their deployment and roll-up under field conditions.

While being set up in the zone of communications, the artillery-technical company, in the threatening period or with the commencement of combat operations, establishes two or more PPKh per army corps. When providing nuclear munitions to allied forces, the principle of establishing these points can be the same as that for U.S. ground forces.

All the supply and storage field points' activity is based on the U.S. ground forces TVD commander's decision. He determines the order for distribution of nuclear munitions among nuclear weapon supply units depending upon their type, yield and quantity. Usually, the supply plan during the replenishment of nuclear munitions reserves is as follows: unloading area, supply and storage points in the TVD, and nuclear weapon supply units.

Field supply and storage points are created on the basis of orders of the artillery-technical brigade staff or higher departments. When selecting regions for their establishment, it is recommended to adhere to the following basic principles: locate [them] as closely as possible to the units and subunits for their quick supply with nuclear munitions; make maximum use of the terrain's protective features which provide dispersal and reliable cover for personnel and all the points' elements from the effects of enemy fire; avoid positioning the points in large population centers and nearby objects, which can become targets for enemy strikes.

As reported in the foreign media, the regions for the establishment of the supply and storage field points are already determined in peace time. In the threatening period or with the commencement of combat operations, appropriate artillery-technical brigade subunits are detached to designated areas at full strength or as a transport column for these points. During subsequent combat operations, the points' personnel and transport resources will be shifted to new areas after reconnoitering them. The measures for providing nuclear munitions security and storage, include deluding the enemy, camouflage (as a rule under one of the rear subunits), and organizing reliable warning communications.

It is considered most advisable to distribute nuclear munitions at night or under conditions of poor visibility. The agency controlling the nuclear munition supply sends a directive, concerning the nuclear munitions supply, to

the supply and storage field point commanders, in which it is specifically directed to whom, how many and what kind of nuclear munitions to distribute. As a rule, nuclear munitions are delivered by the forces of an artillery-technical brigade subunit and, in case of a shortage of them, by specially selected subunits from the receiving units. In the latter case, a transport column arrives in the area where the [field] points are situated. A specially-designated officer or warrant officer, authorized by the receiving units accepts receipt and escorts the nuclear munitions. He is given all the necessary documents and authority. Transporting nuclear munitions from one point to another or directly to units can be carried out by vehicles or by air. The second method is considered the better of the two. During transfer by vehicle, it is specified that all inscriptions and markings will be removed from them or painted over. While in transit, for security reasons, it is considered advisable to avoid thickly populated areas, especially those where the possibility of attack on the column exists. Protection during transfer is carried out by military police subunits and associated personnel.

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FOREIGN MILITARY AFFAIRS

BRITISH AIR DEFENSE ORGANIZATION DISCUSSED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 36-38

[Article by Col V. Lakhvin; "British Ground Forces Air Defense Formations"]

[Text] Imperialism's aggressive wars in Vietnam and the Near East and also the course of the Anglo-Argentine armed conflict in 1982, showed that ground forces combat actions depend mainly on the reliability of protecting their groupings from enemy air strikes. Taking this into consideration, much attention has begun to be paid to the question of air defense organization in the NATO countries. Great Britain, which is an active participant in that aggressive bloc, during the conflict in the South Atlantic, employed air defense forces and resources directly in combat conditions. The results of these combat operations are being studied in foreign countries with the idea of using them to solve ground forces air defense organizational problems.

In the British command's opinion, defense of ground forces formations by regular and attached forces as well as by PVO (Protivovozdushnaya Oborona = Anti-air defense) resources is an important aspect of the struggle with the air enemy. As reported in the foreign press, air defense of an army corps entering the British Army of the Rhine (located in the FRG) is carried out by the artillery division's air defense forces and resources. It comprises two air defense missile regiments, each of which has a control and communications battery and three batteries of RAPIER surface-to-air guided missiles (12 launchers each). In the course of combat operations, one or two BLOWPIPE surface-to-air guided missile regiments can be added to the corps. In the opinion of several British military specialists, they will be transferred from the home country.

Corps air defense is planned and organized on the basis of its commander's solution, in which are shown a formation's zones of responsibility, attached forces and PVO resources, target significance and the rank of their protection. The corps PVO chief (the senior anti-aircraft artillery commander) bears the responsibility for its organization and direction. He allocates the anti-air missile regiments' regular and the attached detachments among the formations, according to the corps commander's solution.

When setting up the corps PVO system, the main efforts are concentrated on protecting first echelon divisions, the corps command post, nuclear strike resources, communications nodes and other important targets. Thus, the mission of providing air defense for a first echelon division and for up to four to eight important targets in the corps' rear area can be entrusted to anti-air regiments. In this case, usually one or two firing batteries are selected for protecting a first echelon division and another battery [is selected] for [protecting] the corp's command post and the nuclear strike resources subordinate to the corps. One battery can protect small-area rear targets (bridges, crossings, etc.) from enemy aircraft and helo strikes. For executing such missions, it is planned to earmark, as a rule, RAPIER air defense missile launchers in groups of four. It is planned to use detachments of the attached BLOWPIPE air defense missile (ZUR) regiments for providing air defense both to division and to several important corps targets.

The division's staff plans and implements PVO based on the formation commander's solution. In so doing, the rank and sequence of protection of its units, the regular and attached forces and resources, the interaction between PVO detachments and the division units they are protecting are determined. The division staff PVO section chief, whose function it is to manage the regular and attached anti-air missile detachments and interface with tactical aviation, located in the division's combat zone, bears the responsibility for organizing air defense. For this purpose, he maintains uninterrupted communications with the commander who controls tactical aviation for resolving problems on the joint use of air space in the division's combat zone.

A BLOWPIPE ZUR battery, organic to an artillery regiment, is the regular anti-air defense detachment of an armored division. It has two platoons of three detachments each. A detachment consists of four crews, each having a launcher and a missile allowance. In all, a battery has 24 BLOWPIPE ZUR launchers.

For strengthening air defense, a first echelon armored division on the main axis, can receive, at the corps commander's decision, up to two RAPIER ZUR batteries from the air defense regiment (up to 24 launchers) and one BLOWPIPE ZUR battery from the regiments attached to the corps. Up to a battery of RAPIER ZURs can be attached to a division operating in the first echelon on a secondary axis. When a division is in the second echelon, its protection will be carried out in the overall corps PVO system.

The first thing to be considered when organizing PVO is the the missions being executed. Thus, in the British military specialists' opinion, the PVO forces and resources of a first echelon division on the offensive, must be concentrated on covering its main axis units and detachments and the command post. The RAPIER ZUR battery will be assigned the mission of providing air defense to the division command post, second echelon, nuclear artillery positions and the reserves. Thus, RAPIER ZUR detachments can be used both as a part of a battery or individually--at several places.

A BLOWPIPE ZUR detachment, from the division's composite artillery regiment, can be assigned to a tank brigade and a motorized rifle battalion operating on the division's main axis. The crews of such ZURs can be used to provide air defense for detachments located in the security zone. BLOWPIPE ZUR detachments

from the corps' attached air defense missile regiments will be used, as a rule, for protecting highly maneuverable first echelon units and detachments, in case they reinforce the division air defense.

As foreign military specialists note, the low mobility of the RAPIER air defense missile installation (ZRK) (deployment time is 20 minutes, roll-up, 10 minutes) and the great dependence of the hit zone on the terrain relief, essentially limit its combat employment in a first echelon division, although, as noted in the foreign press, the ZRK is a highly effective means of hitting air targets. Consequently, it is considered advisable to use a ZUR detachment for the defense of stationary targets and troop bivouac areas, etc. A RAPIER ZUR battery is capable of providing protection against enemy air strikes over an area 10 x 15 km. For protecting a hit zone and mutual cover of complexes, it is recommended that the batteries' launchers be placed at a range of up to 4 km from each other and up to 3 km from the target being protected.

When using RAPIER ZUR detachments for protecting forces on the march, it is suggested that thorough terrain reconnaissance be conducted to mark and equip firing positions along the route and also secure those positions in advance and organize the timely replacement for uninterrupted air defense of the troops. The time interval from the receipt of the order to protect the troops and the occupation of the position, in the opinion of the British military specialists, can take about three hours. Thus, the firing positions are selected in this way in order to ensure air defense for units on the march and mutual protection of the launchers. For this purpose, launchers are deployed along both sides of the route, extending to a distance of 1.5 km from the road and up to 3-4 km from each other. A RAPIER ZUR battery with 12 launchers can cover a section of the route to a distance of 30-35 km.

BLOWPIPE ZUR usually are used for defending division unit and detachment combat formations. Thus, it is suggested that they be distributed in such a way that an unbroken protective zone would be created. It is recommended that BLOWPIPE ZUR crews be placed in the combat formations protecting the units and detachments. As a rule, a detachment, comprising four crews is selected to provide air defense for a battalion. The detachment commander determines the crews' positions, order for carrying out the air defense, and the most likely direction of the air enemy [threat axis]. He receives the information concerning the air enemy and the mission for destruction of air targets from the chief of the division staff PVO section at the division command post, by the radio network of the division being protected. He controls the crews' combat actions on the basis of target designation data or by means of an independent search for air targets in the assigned sector or the area of air space.

RAPIER ZUR sub-units' combat actions are centrally controlled by the corps PVO chief on the basis of existing information concerning the air enemy by means of the mission statements for the destruction of specific targets or determination of sectors or regions of the air space, within the limits of which the subunits must conduct searches and destroy air targets. Communications with subunits can be maintained on radio nets both of the corps and division and units which these subunits are protecting.

The existing air defense organization for ground force formations, in the views of British military specialists, has a number of deficiencies. This mainly refers to the low PVO effectiveness of highly maneuverable units and formations which presently is being carried out, for the most part, by portable BLOWPIPE ZRKs. The absence of RAPIER ZRKs in regular subunits does not allow an effective division PVO system to be created. As is noted in the foreign press, the given factors and also the high effectiveness of the RAPIER ZRK and the portable BLOWPIPE, which appeared during the Anglo-Argentine conflict, predetermined the changes in ground force formation air defense organization. Thus, it is suggested that each army corps air defense regiment have four RAPIER ZUR batteries, two batteries of wheeled self-propelled installations and two non-self-propelled. For enhancing division air defense effectiveness, it is suggested that a composite artillery regiment have three anti-air batteries, two of which could have BLOWPIPE ZRKs available (24 launchers in each) and in one, a battery of wheeled self-propelled RAPIER ZRK.

In the opinion of the British high command, carrying out planned actions by reorganizing ground force PVO units and subunits will make it possible to strengthen significantly, formation air defense under any circumstances.

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NATO ANTI-TANK MISSILE SYSTEMS DISCUSSED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 39-43

[Article by Lt Col V. Nesterenko; "NATO Armies' Self-Propelled Anti-Tank Systems"; passages rendered in all capital letters printed in boldface in source]

[Text] Hiding their aggressive intentions under the notorious thesis of the "Soviet threat," the military leadership of the USA and other NATO countries has been carrying out, since the mid-70's, a broad conventional weapon modernization program, with the goal of equipping the combined armed forces of the bloc with qualitatively new systems of weapons and military equipment. One of the main components of this program is the further improvement of ground forces anti-tank weapons and, especially, anti-tank missile systems (ATMs), which, in the opinion of foreign specialists, have proven to be the most effective means of engaging armored targets, and capable of successfully conducting fire both on the offense and defense.

With the introduction, in the early 1970's, of the second generation ATMs--semi-automatic systems with wire guidance--their division into two types took shape more precisely; light (man-portable), and heavy. The first type includes the American portable Dragon (weight of the launcher with an AN/7AS-5 infrared sight--7.8 kg, crew--two, basic load--three missiles); and the French-West German MILAN ATM (weight of launcher with Mira-2 infrared sight--23.2 kg, crew--two, basic load--two missiles). For heavier MILAN systems in the West German and French armies, self-propelled launchers are also employed, as a rule, on light military vehicles. Also, a majority of the West German Marder IFV's are equipped with this system, having four ATGMs per vehicle. Foreign experts believe that light ATMs are the most effective anti-tank means for infantry sub-units from platoon to battalion. The number of these systems in infantry and mechanized divisions of the principle NATO countries reaches 200-250.

The heavy ATMs, TOW (U.S.) and HOT (France, FRG), are mainly employed as armament for combat helicopters and emplacement on self-propelled carriers.

In the mid-70's, the bulk of the self-propelled ATMs in NATO armies comprised launchers mounted on light military vehicles without any protection for the

combat crew from enemy fire. Examples are--the American self-propelled TOW (on the 1/4 ton M151A2 jeep and the 1/2 ton M274 mechanical mule), the British Vigilant and Swingfire (on variously modified Landrovers), the West German Cobra 810B (on a 1/4 ton jeep), the French ENTAC (on the M201) and others.

Combat experience in the Middle East showed that the effectiveness of unprotected launchers under enemy fire is significantly reduced. Their survivability on the battlefield was also lower, which required that these weapons be employed primarily from ambush. The self-propelled ATMs, mounted on armored vehicles available in the U.S. and West Germany, did not fully satisfy the apparent requirements. For example, the self-propelled TOW fielded in the U.S. Army (mounted on the M113 APC, did not provide sufficient armor protection for the combat crew, while the West German Jagdpanzer Rakete was armed with an obsolescent French SS-11 ATGM, with a manual fire control system. Therefore, in the 70's in the leading NATO countries, work was begun to develop self-propelled ATMs with better armor protection, greater mobility and combat readiness, operating with high effectiveness directly in combat units both in the defense and offense. By the beginning of the 80's, fielding in the armies of these countries had already begun of self-propelled ATMs which satisfied current requirements, the M901 (U.S.), Jaguar-1 and Jaguar II (FRG), Mephisto (France) and Striker (Great Britain). Their principal characteristics are shown in the table.

#### BASIC CHARACTERISTICS OF NATO SELF-PROPELLED ATM

Model Designation (Developing Country, Year Fielded)	Combat Wght	Maximum	No. ATGM on	Basic	Maximum
	Tons	Firing Range Meters	Launcher	Load	Speed km/hr
	Crew Number	Minimum	Machine Guns	Bullets	Range, km
M901 (U.S., 1978)	11.8	3,000	2	12	68
	5	65	1 x 7.62	2,000	380
Jaguar-1 (FRG, 1978)	23	4,000	1	20	70
	4	75	2 x 7.62	3,200	400
Jaguar-2 (FRG, 1982)	--	3,000	1	--	70
	4	65	1 x 7.62	2,000	400
Mephisto (France, 1982)	13.3	4,000	4	12	90
	4	75	--	--	1,000
FV102 Striker (UK, 1976)	8.4	4,000	5	10	80
	3	150-300	1 x 7.62	3,000	480

The self-propelled M901 ATM was fielded by the U.S. Army in 1978. It is mounted on the tracked, amphibious M113 APC and has a raised armored TOW launch platform mounted on a modified dual-launch tube M27 turret. Between them is a combination (day-night) gunner's sight and IR sensor for following the ATGM.

The gunner's sight system includes a daylight variable-power telescopic sight (x2.5 and x13) and an AN/TAS-4 IR sight for night firing and for low light levels. The launcher can be moved from 30° depression to 34° elevation and traverses 360°. For reloading or to transfer the launcher to travel position, the hydraulic platform lowers toward the stern of the vehicle. Reloading is accomplished manually without any crew members leaving the vehicle. A trained crew can accomplish this in 40 seconds.

Around the circumference of the modified turret are placed prismatic observation blocks, a mount for the 7.62-mm machine gun, and, on the forward section, there is a base under the elevating assembly for the ATGMs. Inside the turret there is a space for the gunner and the fire control system.

As is apparent in the foreign press, the aluminum hull armor is reinforced in comparison with the regular M113 APC to ensure heightened crew protection from small arms fire and artillery shell fragments.

American military specialists believe that the self-propelled ATM M901 would, as a rule, employ concealment in battle, selecting firing positions behind natural cover. In case of a threat to the vehicle or, when combat conditions require, the launcher may easily be removed for firing using a portable device for which an auxiliary tripod is also transported on the vehicle.

According to the foreign press, about 1,200 self-propelled M901 ATMs were issued to American ground forces stationed in the FRG, where companies were formed from them to provide fire support for mechanized infantry and reconnaissance battalions. Altogether, the U.S. Army plans to purchase more than 2,500 of them.

The launcher system of the self-propelled M901 ATM, which is manufactured to fit the standardized armored turret, may be emplaced on other combat vehicles. For example, the Netherlands bought 173 of the systems for mounting on infantry fighting vehicles built by the American firm "Food Machinery and Chemical Corporation [FMC]," modeled after the M113 APC.

In 1983, the Spanish firm "Tolbot" built an experimental self-propelled Cazador ATM. An M901 launcher system was mounted on the chassis of an American M41 light tank in the arsenal of the Spanish Army. This model has a combat weight of about 23 tons, a crew of four, a basic load of 12 TOWs, maximum speed on highways of 80 km/hr, and a range of 560 km.

The WEST GERMAN SELF-PROPELLED Jaguar-1 ATM, with which the anti-tank companies of mechanized infantry brigades are equipped (12 launchers), has been in service in the Bundeswehr since 1978 (316 assigned in all). It constitutes a self-propelled Jagdpanzer Rakete launcher, but besides the SS-11 ATGM, there is also a launcher for the HOT ATGM. The frontal area of the

vehicle's hull is reinforced with armor plates. There are also side shields. The aiming-launching assembly includes a single unit containing an optical sight with x4 and x12 magnification and an aiming apparatus, as well as a compact turret containing a mechanized ready service magazine for eight HOT ATGMs, the advancing-guiding mechanism with an ejector for emptied transport-launch containers, and an automatic loader. The remainder of the basic load (12 missiles) is located in the fighting compartment. As a result of the automatic loading, the rate of fire is as high as 3 rounds/minute. The self-propelled Jaguar-1 ATM is also armed with two 7.62-mm machine guns. One of them is located in the spherical cupola next to the driver, and the other on the gun ring of the commander's cupola. The vehicle is also armed with grenade launchers for laying a smoke screen and an air filtering system for protection in contaminated areas.

The self-propelled Jaguar-2 ATM, which entered service in the Bundeswehr in 1982, is modeled after the Jagdpanzer 90-mm self-propelled anti-tank gun. The launcher has been redesigned and the vehicle body reinforced with additional armor (similar to the Jaguar-1). The TOW launcher, which can be moved within the parameters of +/-30° in azimuth and from -10 to +15° in elevation, is located in the fighting compartment, on the elevating carriage, with the hydraulic drive. Armored hatches provide protection for the gunner during firing.

The Jaguar-2 is equipped with an air filtration system, a night-driving device, radios, and smoke-grenade launchers. As opposed to its predecessor, it has just one 7.62-mm machine gun, which is mounted on a gun ring on the commander's cupola. The TOW launcher is lowered for travel. The bundeswehr leaders plan to field about 160 of these models with their ground forces by 1986. Anti-tank companies of tank brigades will be equipped with 12 each.

The FRENCH SELF-PROPELLED Mephisto ATM is modeled after the VAB wheeled armored transporter, on which a redesigned HOT ATGM launcher complex is placed. It includes an armored elevating platform with 360° rotation with 4 missile-launching tubes, a periscopic optical sight (x3 and x12), a fire-control device, electric drive, and storage for 8 HOT missiles, which are located in the aft end of the fighting compartment. The launcher lowers for travel. The vehicle has an air filtration system which permits operation of the launcher in contaminated terrain.

Altogether 135 self-propelled Mephistsos will be delivered to ground forces between 1983 and 1986.

The BRITISH SELF-PROPELLED Swingfire ATM is produced in two variations. The first is a self-propelled FV438 launcher, modeled after the aged Trojan armored personnel carrier and has been in the arsenal since the beginning of the 1970's. Two launcher tubes are placed on the rear part of the vehicle. The FV438 has a weight of 16.2 tons, a crew of three, and a basic load of 12 Swingfire missiles. Besides the main armament, the self-propelled launcher has a 7.62-mm machine gun. Missile guidance is achieved both from the vehicle and from a portable sight located up to 100 m from the launcher. The launcher can be located behind natural cover.

A new self-propelled ATM, the Striker FV102 also armed with the Swingfire missiles, appeared with British ground forces in 1976. It is modeled after the tracked Spartan armored personnel carrier, and has a launcher cassette for five missiles in transport/launch containers on the aft portion of the vehicle. Five additional Swingfire missiles are located in the fighting compartment.

The Striker gunner, whose space is to the right of the vehicle commander, has a monocular, periscope sight with variable power (x1 and x10). The commander's cupola has eight prismatic blocks and a monocular periscope sight with an aiming marks for directly firing the machine gun which is emplaced on the right side of the commander's cupola. On the frontal inclined armored plate there are two 4-barrel smoke grenade launchers.

Since 1979, the Franco-West German Milan anti-tank missile has been produced under license in Great Britain. The portable variation has been fielded in Army sub-units. Meanwhile, English firms have produced variations of the launcher on various chassis. For example, the Alvis firm build experimental models of the self-propelled MILAN on the chassis of the Spartan APC. The fire control system for the MILAN ATGM is located in the combat compartment. It has a fully rotating turret and two launch rails, between which is mounted the gunner's sight. System weight (minus missiles) is 167 Kg. An experimental model of an ATM was demonstrated at the beginning of the 80's on the chassis of a new English IFV, MCV-80) and reportedly superior aiming-launching equipment was also employed.

In addition to heavy self-propelled ATGM launchers, the NATO armies also have TOW and MILAN ATGMs on light military vehicles. As a rule these are assigned to the anti-tank sub-units of airborne formations. These ATM systems amount to a light army vehicle with the addition of a simple assembly which attaches a regular portable launcher to the vehicle for firing from it. When necessary, the launcher may be easily removed for ground employment. The basic load of such a system is 6-8 missiles.

Launchers of this type include the West German self-propelled ATM systems for TOW and MILAN on the 3/4 ton truck FL500, the English experimental "Swingfire" and the MILAN on the amphibious Saboteur MK 3 (6x6), and the obsolete American TOW on the M151A2 and the M274 jeeps. The majority of them are air droppable, and can be carried slung below army helicopters.

In the early 80's, a great deal of attention was devoted to such launchers by American specialists. As reported in the foreign press, this explains the appearance of light yet sufficiently effective, anti-tank systems for sub-units designated for the Rapid Deployment Force and the experimental so-called Light Infantry Division.

Production has begun in the U.S. of a new 1.25 t, high mobility vehicle, HUMMER M998, and a multipurpose vehicle (FAV-dune buggy), some of which will be carriers for the TOW launcher.

The Hellfire ATGM with a semi-active laser seeker has been produced in the U.S. since 1982. This missile is the main armament of the Apache anti-tank helicopter AH-64A. At the same time, development of a ground launcher system, designated for mounting on various combat vehicles continues. An experimental model of such a launcher, mounted on a light truck in 1983, is conducting experimental firing.

In the early 80's in the leading NATO countries scientific research and experimental design [establishments] were created for developing third-generation anti-tank missile systems and self-propelled launchers for them. Based on foreign press material, NATO military specialists devoted most of their attention on the development of self-propelled ATM systems to increasing their survivability on the battlefield. American specialists are following the path of developing self-propelled launchers employing fiber optic cable for missile guidance. And European firms plan to place missiles and sights on armored platforms elevated several meters. In either case, in the opinion of foreign specialists, the combat effectiveness of such launchers will increase significantly both due to increasing tactical concealment and due to reducing vulnerability to enemy fire.

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SOUTH AFRICA'S LAND MINES DESCRIBED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 45-46

[Article by Col (Reserve) N. Zhukov; "The Republic of South Africa's New Land Mines"]

[Text] The YuAR's [Republic of South Africa] industry has developed and is producing for its own army several types of land mines which have already found use during the perpetration, by the YuAR's troops, of brutal assaults on contiguous states. The experience and technical solutions of the most modern foreign models were used in making them. One of the new mines' characteristic features is that they are made of high strength plastics, and, as a result, cannot be detected by induction mine detectors designed basically for search of mines having quite large metal parts. Another feature, as mentioned in the foreign press is the simplicity of handling. The basic features of these mines are presented in the table.

BASIC CHARACTERISTICS OF THE NEW YuAR MINES

Model Designation	Body Material	Weight, kg	Dimensions, mm	Blast Radius, m	Exploder
		Total	Diameter	Height	
		Explosive			
No. 8	Plastic	7.4	270	In Place	Mechanical Contact
		7	160		
R2M2	do	0.13	70	do	do
		0.06	40		
No. 2	do	1.6	215 x 38	50 (in 600 Sectors)	Wire Controlled
		0.68	178		

The ANTI-TANK and ANTI-TRACK MINE NO. 8, has a cylindrical body of [molded] thermoplastic material. It is filled with hexoTNT with a stabilized hexogen wax intermediate detonator. A pressure cap is placed on top of the body. Its external side has an uneven surface which, in the developers' opinion, must further hinder detection of the planted mine.

A pressure-actuated exploder mechanism is always located in a fuse [primer] socket. It is fitted with a safety device to ensure safe handling of the mine during transport, carrying and planting. For switching the exploder from the safe to the armed position, there is a cocking lever on the top of the pressure cap which can occupy two fixed positions, being secured by a lynchpin between two lugs on the side part of the body. Next to the lugs are the inscriptions: ARMED and SAFE, marking the armed and safe positions, respectively.

In the side and bottom parts of the body, there are threaded primer sockets for planting the mine in a non-retrievable position. For this purpose it is envisaged to use tension or unloading action general-purpose timed exploders.

Mine No. 8 is planted in the ground by hand and then masked by a thin layer of dirt and vegetation. The activation of the ammunition occurs when a tank or other combat vehicle presses on it. As noted by foreign specialists, the large weight of the mine's charge and the quite high effectiveness of its action make it possible to inflict significant damage on a tank (especially tracked or wheeled).

The high explosive ANTI-PERSONNEL MINE R2M2 is intended to be planted by hand and, as a rule, in the ground. It is made from the same material as the foregoing model. It has a body with a high explosive charge and mechanical pressure-actuated exploder permanently located in the mine and fitted with spongy springy material and also a pressure cap instead of an arming spring. The latter is strengthened at the top by coarse radial fins [ribs] and fitted with a safety pin. The pressure cap can rotate relative to the mine's body, occupying one of two fixed positions--armed or safe. While the mine is in storage or being transported, the safety pin rigidly locks the pressure cap in the safe position so that it is not accidentally shifted to the armed position.

To arm the mine, one only need remove the safety pin and rotate the pressure cap. The mine actuates when pressure is exerted on its pressure cap.

ANTI-PERSONNEL MINE No. 2 is a fragmentation directed charge. It is essentially an exact copy of the American M18A1 CLAYMORE model and it is supplied to troops in a configuration for wire control. Such mines have been used most often in the case of an ambush on roads.

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FOREIGN MILITARY AFFAIRS

AIR-TO-AIR COMBAT DISCUSSED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 49-56

[Article by Lt Col V. Kirillov; "Attack Aircraft in Battle"; passages rendered in all capital letters printed in boldface in source]

[Text] According to the classification system used abroad, tactical combat aircraft, intended for action against ground targets, are divided into light attack, attack, and fighter-bombers.

The crews of the first group launch strikes near the forward edge of their forces[FEBA] under the control of forward air controllers. They employ their weapons only when they see the target. In addition to providing direct air support for ground troops on the battlefield, attack aircraft can strike objectives in the tactical depth of the enemy's battle formation. Fighter-bombers (usually all-weather aircraft) differ from attack aircraft in that they are faster and are adapted for air war.

As the foreign press notes, attack aircraft owe their "second birth" to the local wars unleashed by the imperialists and their puppets in which the aggressor's troops needed direct air support to a greater degree than Western experts expected. Thus, without aviation's active participation, not one of the American interventionists' punitive operations in South Vietnam would have taken place. A large number of all the sorties by the Israeli extremists' air force, in their aggressive actions in the Middle East, were devoted to air support.

The experiences of wars, exercises and aerial experiments have shown that a small-sized, simple, reliable, maneuverable aircraft with a good view from the cockpit is well suited for attack operations. With this, speed and altitude data are not of primary importance. But these aircraft left the scene back in the 1950's, giving way to supersonic fighter-bombers. All the American command's attempts to use the latter for direct support of ground forces ended up unsuccessful. Therefore, in the West, they came to a conclusion on the need for attack aircraft whose capabilities meet the specific conditions of actions above the battlefield. These aircraft began to appear in the NATO countries' air forces in the 1970's. Despite several structural differences, they share the following: subsonic speed; combat load (reaching one third of

the plane's weight); good maneuverability at low altitudes providing the opportunity to evade troop air defense; low cost; simplicity of piloting and servicing. However, this type of aircraft does not have on-board radar which significantly complicates, and at times completely excludes, their use in adverse weather conditions.

Considering the experience available, foreign military specialists developed a conditional "efficiency formula" for the modern attack aircraft, which closely ties equipment to tactics and reflects the possibilities of a standard combat sortie--specifically the dependence of efficiency on four basic factors: "reaction," "survivability," "target identification," and its "destruction."

THE REACTION FACTOR. This refers to the time from the moment the attack aircraft is scrambled to the beginning of the attack on the designated target, or the reaction time.

The importance of this factor in local wars was conditioned primarily by the dynamics of the combined-arms battle. Ground units became more mobile and attacked at a quick pace. Their air mobility--the wide use of transport and combat helicopters--has played a significant role in this. Suddenly-arising missions, the rapid change in the situation brought into being the ground forces commander's requirement to have at his disposal aircraft support shortly after scrambling. A belated strike little affected the course and outcome of the battle. However, as the foreign press notes, a combat aircraft with externally-mounted ordnance could not appear right away above the force's FEBA for completely objective reasons. Therefore, a delay, so undesirable under battle conditions but necessary for the equipment, is really needed for verifying the mission and arming the aircraft. A simple analysis has shown that a "reaction" included the time used in carrying out the following obligatory measures: mission verification by the ground forces aviation liaison [officer] (determining the duty forces, type of ammunition, means of approach to the target, composition of the order of battle); passing the alert to the airfield; preparation of the attack aircraft for takeoff and flight to the FEBA; search for the designated target and its destruction. The first experiences of direct support, derived by the American interventionists in South Vietnam, showed that 1.5 - 2 hours were lost on all these operations.

That amount of time did not satisfy the ground forces command. However, the biggest loss of time was their fault; transmitting the alert through the combat command land network was too slow, having been delayed at every intermediate stage. As a result, very often the attack aircrafts' mission arrived at the time when they should have been attacking the enemy. Therefore, the organization of a special alert network was the first improvement aimed at decreasing the reaction time. It connected a forward air spotter with the direct air support center and was not burdened by any other conversations.

Information on the ground situation, changes in the front lines (location of friendly forces) reached the combined-arms unit liaison [officer] at the attack aircrafts' airfield (using the same map as the forward air spotter, to facilitate communication). Knowledge of the current situation permitted the ground forces liaison [officer] to quickly clarify the assigned missions and pass it on to the flight crews. According to the so-called simplified alert

scheme, the forward air spotter maintained a direct link with the attack aircrafts' air base, bypassing the direct air support center. This provided additional time savings.

In calculating and setting "reaction" time, the American specialists, after considering the experiences of combat, came to the following conclusion. Based on the "combat load/flight range" criteria, the piston-powered A-1 SKYRAIDER, capable, with its 3 tons of ammunition, of operation in an 800-km radius, was suited for direct support missions in South Vietnam. But its slow (450 km/hr) cruising speed did not permit it to arrive in the strike zone in time after an alert. On this score, "Air Force" Magazine wrote that, the assumption about the ideal suitability of the A-1 attack aircraft for direct support proved groundless, since the very low cruising speed came into conflict with the reaction time requirements.

The F-100 SUPER SABRE jet fighter, which replaced the A-1, had a smaller combat load weight and shorter flight time (that is, it ranked lower than the former in "combat load/flight range" criteria), and moreover, it required a longer runway and used three times more fuel per flight. The probable error of its destructive systems was almost twice as great. But the USAF representatives believed that it was more important to support their ground forces from the air, no later than thirty minutes after receiving a request. Therefore, despite the above-mentioned drawbacks, the F-100, which was twice as fast and needed less flight preparation (12-15 min.) than the A-1, was indeed chosen to accomplish uncharacteristic combat missions.

However, with the established norm for reaction time (30 min.) and the flight preparation time of the aircraft (15 min.), the crew has only 15 minutes to accomplish the mission (not counting the time needed to calculate and draw up the flight plan). A question arose concerning the efficient positioning of aircraft, that is, bring the airfields closer to the front lines (area of combat operations). Based on the idea that, besides objectives on the field of battle, in the course of 24 hours, attack aircraft must destroy targets which are located 100-200 km away and influence the battle situation, American military experts considered it vital that airfields be located 90-180 km from the FEBA. F-100's did not meet these requirements because, like all jet fighters of that period, they required a concrete runway no shorter than 1800 m.

Having experienced a great demand for attack aircraft, the U.S. Air Force quickly refitted A-7A CORSAIR-2 aircraft of that type for use from the ground, after which they received the designation A-7D. However, these aircraft were heavy, not noted for maneuverability and also required a long runway (not less than 2,100 m). During the war in Vietnam, A-7Ds carried out nearly 7,000 sorties, of which the vast majority (over 5,000) were for isolation of the combat area. Due to the unacceptably long "reaction" and insufficient flexibility for providing direct air support, A-7D units were very rarely used. Therefore, the main burden fell upon a lighter jet aircraft, built to strike ground targets--the A-37 attack aircraft.

The Israeli Air Force almost always had around 200 subsonic A-4 SKYHAWKS, which, when lost, were regularly replaced by deliveries from the U.S. These

attack aircraft took part in all the local wars in the Middle East, mainly on ground force direct support missions. In the view of Western specialists, SKYHAWKS have diverse armaments, a sufficiently high combat load, and an acceptable cruising speed. However, its "reaction" does not meet the required standards of NATO and a number of capitalist countries.

In the local war period, an effective way to shorten the time needed for attack aircraft to reach the FEBA after an alert was the air watch. Although it was uneconomical, it provided the highest degree of readiness to carry out a mission. In the more intense times of battle, the crews took off even before receiving a concrete objective and were located in a holding zone near the front lines (or the position of the forward air spotter), maintaining flight conditions for minimum hourly fuel consumption. After receipt of the combat mission, the fliers quickly began to carry it out. Reaction time was cut as time for pre-flight preparation, take off, flight formation and travel to the watch zone was deducted. As the Western press has noted, as long as the situation called for very frequent use of this method, the possible length of a watch came to be one of the basic fighting qualities of an attack aircraft.

American specialists believe that, based on this index, the piston-powered A-1 attack aircraft, which took part in past local wars, has significant advantages over other aircraft. With a large combat load (up to 3 t) it could stay in the watch zone up to 3 hours and, after that, fly to a target up to 200 km from the watch zone. However, this aircraft was transferred to the ranks of the obsolete, not only for its slow flight speed, but for other reasons, too: great vulnerability, depletion of flight resources, etc.

The foreign press emphasizes that by 1973, that is, the end of American aggression in Southeast Asia, and the October War in the Middle East, a significant amount of experience had been accumulated which permitted the formulation of requirements for a new attack aircraft. There was just no aircraft which met these requirements, including those for "reaction" time to an alert from ground forces.

In 1976, new A-10 THUNDERBOLT attack aircraft began to appear in the U.S. Air Force. Their fighting qualities were worked out in consideration of the experience garnered in past local wars. In 1977, the American Air Force command tested the combat capabilities of the A-10 at proving grounds under conditions most nearly approaching those of combat. The aircraft operated in an area of limited size 25-50 km from the front lines. They carried out missions in direct air support of ground forces. Their combat load was 18 MK82 500-pound aerial bombs. The operational range reached 460 km. The length of the watch approached 2 hours, after which 20 minutes of reserve fuel remained to accomplish a combat mission.

Preparation time for takeoff with a bomb rack during the test (112 experimental flights were made in all) was cut from 30 to 15 minutes.

Thus, on the basis of experiences from local wars, the U.S. Air Force followed the road of building a heavy (maximum takeoff weight 21.5 t) and, in present terms, low-speed attack aircraft (maximum cruising speed of 720 km/hr) capable

of delivering on a target a great number of bombs or other means of destruction (total weight of 7.25 t). Considering that takeoff time is 15 minutes, it could be based on small forward airfields and landing strips. The aircraft, as the Western press announced, is "packed up" in the standard reaction time of 30 minutes.

The European NATO members set out to create light (5-7 t) but faster (up to 1,000 km/hr) attack aircraft. Thus, the French and FRG air forces included ALPHA JETS in their arsenals, the British--the HAWK, and the Italians--the MB.339.

Besides this, in the view of foreign specialists, the British HARRIER tactical fighter, with vertical or short-range take off and landing abilities, is suited for direct air support of ground forces in terms of "reaction." However, in their opinion, this type of aircraft has substantial drawbacks which limit their use for these missions, in particular, its complicated servicing, small disposable load and range, high cost and the significant expenditures of resources and time in training the flight crew.

**THE SURVIVABILITY FACTOR.** In characterizing the combat qualities of aircraft, Western specialists define the term "survivability" as the ability of an aircraft to withstand the effect of an enemy without a significant decrease in its fighting capabilities. In a simplified form it is the probability of returning to base after completing a combat mission while opposed by the enemy. In evaluating a tactic utilizing methods of avoiding anti-aircraft defenses and delivering a strike (over an extended period) the term used most often abroad is survival rate which is characterized as the level of losses (relative between the number of craft shot down and the total number of sorties carried out).

Based on the results of local wars, attack aircraft have the highest level of losses in comparison to other types of combat aircraft. This is explained as follows. For example, the fighter bomber, operating against targets at a relatively great distance, avoided the fire screen of an organic anti-defense unit at low altitude at top speed. The attack aircraft did not avoid it, but constantly operated under the intense fire of anti-aircraft artillery, low-altitude mobile missile units, as well as under the threat of attack by interceptors, and means which are difficult to detect, jam or subject to fire. In combatting anti-aircraft defenses, the attack aircraft was doomed to [use] mainly defensive tactics--using counter anti-aircraft, anti-missile and anti-ground fire maneuvers, as well as possible means of deception.

According to information in the "International Defense Review," the average level of losses for American aircraft during the Korean war was 0.44 percent. However, in relation to aircraft operating as attack aircraft and carrying out direct air support missions, the range would be 2-3 percent. In the war in Southeast Asia, American attack aircraft (and the aircraft "replacing" them) flew over the territory of South Vietnam, where the calibre of anti-aircraft weapons of the opposing side did not exceed 12.7 mm. With this, there was one hit for every 90 F-105 fighter-bomber sorties and one for every 240 for the lighter F-5. For attack aircraft alone this figure was significantly worse. In just two years with this weak anti-aircraft opposition, the U.S. lost 182

aircraft. A-1 and A-37 attack aircraft were almost never in operation for reasons of slow flight speed and poor protection of the basic units and structural assemblies.

During the October war in the Middle East, losses of Israeli aircraft averaged 0.8 percent at a time when they were 1.5 percent for A-4 Skyhawks. In order to develop measures to improve the survivability of various types of aircraft, U.S. specialists performed an evaluation of their vulnerabilities. Refitted combat aircraft were used as targets and the results of anti-aircraft fire at them provided guidance as to the number of hits necessary to put a target out of action. Based on the data derived, a chart (Fig. 4) was developed from which it is evident that the attack aircraft are the most vulnerable. That confirmed the conclusions of American specialists

based on an analysis of actual combat actions during the war in Vietnam.

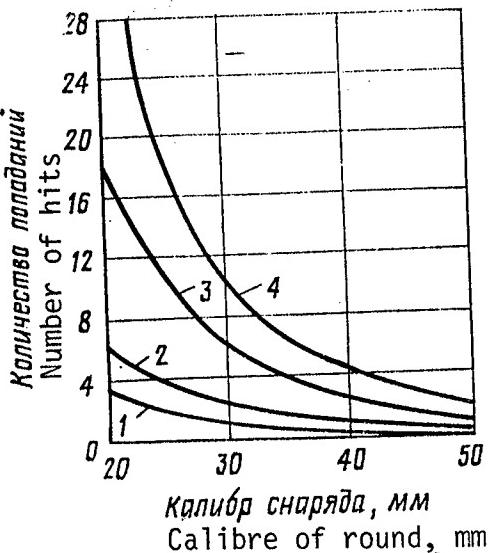


Fig. 4 Calculated Number of Hits From Various Calibre Necessary to Destroy an Aircraft. 1. Light Attack. 2. Medium Tactical Fighter. 3. Heavy Fighter-Bomber. 4. Bomber.

As the foreign press reports, before the U.S. began to design a new attack aircraft, the vulnerability of various types of combat aircraft was studied. They discovered six basic causes which led to the non-return of aircraft to their bases as a result of enemy action: fires or explosions in the aircraft, destruction of its power plant, loss of controls, pilot death, explosion of on-board ammunition, and destruction of the air frame. Pilot error, freak accidents, and unknown causes fell into the "other" category (Fig. 5.)

With this, the American specialists discovered that the loss of subsonic single-engine attack aircraft occurred mainly as a result of the pilot's death or loss of power. The main causes for the loss of single-engine supersonic aircraft were fire, destruction of the power plant, failure of the controls, and pilot death. Twin-engine sub- and supersonic aircraft burned and lost controls and crew after being hit by enemy fire more often than the others. From this it was concluded that to improve the survivability of the aircraft being designed, one must first protect the pilot (regardless of speed and number of engines), the fuel system, power plant (on single-engine aircraft) and the control system (on supersonic aircraft).

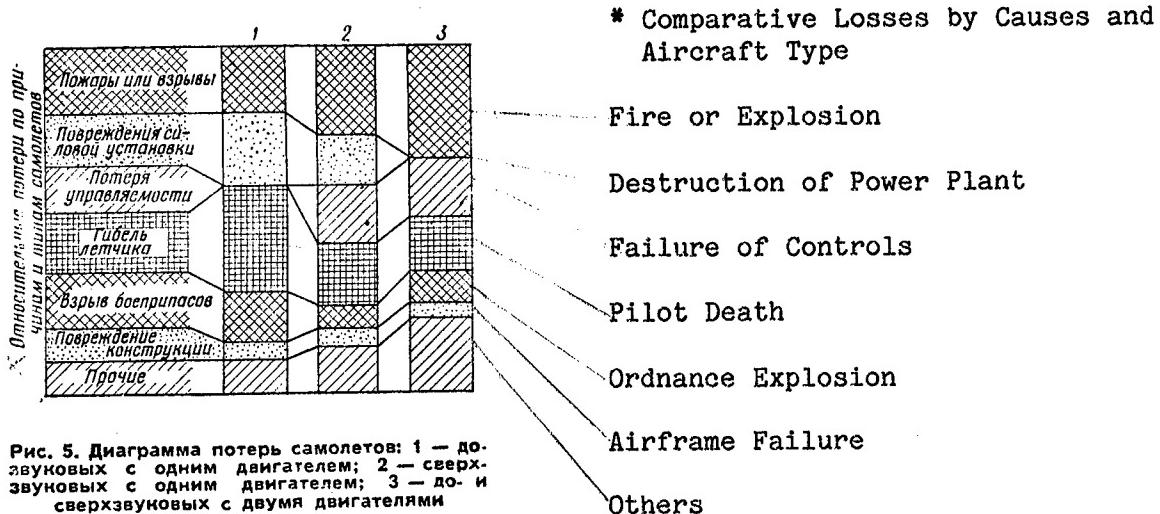


Fig. 5 Aircraft Loss Pattern.

1. Single-Engine Subsonic
2. Single-Engine Supersonic
3. Sub- and Supersonic with Two Engines

The next stage of the study determined the most advantageous aircraft configuration which was inherently highly survivable. The vulnerability of four standard configurations was studied during identical combat operations. As the Western press attests, aircraft with two dispersed engines have the best possibility of surviving in the face of enemy countermeasures. As a result of the study and operational tests, the design of the future craft was outlined (the "survivability" factor played the lead role here)--its engines had to be mounted on pylons and placed on both sides of the fuselage, besides which, each of them must, if possible, be protected from anti-aircraft fire from below as well as from the side (with the stabilizers). The A-10 attack aircraft was built this way.

Western specialists believe that the pilot is one of the most vulnerable objectives regardless of the aircraft's configuration, since putting him out of action leads to the aircraft's loss even without damage to its systems which provide for flight continuity. The pilot's size relative to the aircraft's surface is not large, but nonetheless, foreign writers are of the opinion that he must be safely covered from all sides. Some of them believe that a second pilot (installing a cabin for a second crew member) leads not only to increasing the craft's weight, but even increases the potential for its loss. The Western press notes that such a conclusion contradicts the generally-held belief, but it is partially true in the case of attack aircraft, if one considers the specific conditions of its use in combat. In practice, there is a different approach to the solution of the problem: The A-10 attack aircraft has one crew member and the ALPHA JET, HAWK and MB.339

two. However, the FRG, France, Great Britain and Italy are working to create single seater versions of these craft. At the same time, as the weapons become more sophisticated and the attack aircraft are armed with guided means of destruction, and also because of the efforts to make them suited for any weather, it is becoming difficult for one pilot to carry out all the operations of a combat aircraft. A second crew member can be of help to him--the weapons control operator (he is the navigator). Based on this, the U.S. developed a two-seat variation of the A-10 attack aircraft.

In evaluating the "survivability" factor, military specialists conditionally divide measures to defend attack aircraft into two types: passive and active. The former includes the aircraft's armor and the redundancy of its systems. The latter are good speed and the ability to fly at an extremely low altitude, thus lessening the effectiveness of enemy air defenses. The main means of decreasing the vulnerability of the American A-10 attack aircraft are passive. Specifically, the cockpit is titanium plated below and on the sides, and can withstand a hit from a 23-mm high explosive-fragmentation shell. In the event that the redundant hydraulic system goes out of operation, the pilot can continue the flight using the mechanical (cable) one. The separation of the engines by a significant distance precludes hitting them with one shell. Destruction of one engine does not lead to a crash. The thrust of the remaining sound engine is sufficient to return to base. The fuel tanks seal themselves when penetrated by a 23-mm shell. The engines produce a low level of noise and IR emissions.

As noted above, the European NATO countries did not want 20-ton attack aircraft, believing that the notion of "passive defense," by limiting flight speed, is unacceptable for the conditions of their TVD. For that reason, the West German "Flug Review" wrote that the large single-seat American A-10 could be used only where air superiority has been achieved. At the same time, the appearance of vertical or short takeoff and landing aircraft was termed premature and so a compromise solution was adopted: An order was placed for the light ALPHA JETS, which are able to conduct a defensive battle and breakthrough to a target at near sonic speed, while not being slower than the A-10 in "reaction."

In casting doubt on the European thesis, unproven in Vietnam, that "the best armor is speed," the magazine "Interavia" wrote that great speed is necessary only for delivering a surprise attack on immobile targets in an isolated combat area. In the direct support of ground forces on the battlefield, where a flight is related to the search and identification of small mobile objectives and delivery of directed strikes against them, overly rapid movement by the craft, relative to the earth's surface, severely complicates the pilot's handling of these tasks. When the flight is executed at a low altitude, a change from 700 km/hr to 900 km/hr bears certain tactical benefits, but, the magazine maintains, one must consider not only achieving invulnerability but also the necessity of destroying a given target.

At the same time, the Western press notes that the maximum speed of an A-10 without external stores is 720 km/hr, but with six MK82 bombs, it drops only to 713 km/hr, and to 770 km/hr (as opposed to 1,000 km/hr for the ALPHA JET). In other words, in delivering a strike, the speed characteristics of both

machines are practically equal, but the A-10 has a significant advantage since it can carry a combat load three times greater than the ALPHA JET.

In the opinion of American specialists, who rest their conclusions on the experience of local wars, size, or more exactly, target area, is somewhat more important than speed in reducing the vulnerability of an attack aircraft. There the lighter ALPHA JET, HAWK and MB.339 have an undisputed advantage.

In reviewing the "armor vs speed" problem, a compromise was investigated: increase the speed (to reasonable levels) and reduce the weight of the armor. In accordance with the U.S. regulation on thickness (strength), armors are usually designated by the type of shell travelling normal to the aircraft's surface. Proceeding from this, during one experiment, 14.5-mm armor-piercing incendiary bullets were fired at a stationary target at an aspect ratio of 3/4 - 4/4 at a distance of 300 m. After the vulnerability study, a conclusion was reached that 450 kg of armor were necessary to protect the cockpit from such bullets. However, the tactics specialists whispered to the American engineers that aircraft maneuverability and its individual defense are mutually complementary. After that, a complete model of the combat situation was set up with consideration given to the aircraft's maneuvering. The results were different; satisfactory defense was achieved with significantly lighter armor.

The foreign press reported that in local wars most attack aircraft losses occurred over the strike objective. Before that point, sufficient invulnerability was assured by flying at extremely low altitudes since air defense units detect the target too late and its angular movement was so great that precision fire is practically excluded. The situation changed markedly in the target area while climbing in order to use one's own means of destruction. The angular speed of travel decreased sharply, the aircraft spent more time in the air defense zone at a dangerous altitude, offering those shooting from the ground a large target area.

The bullet (shell) hitting the aircraft produces different results, depending upon the angle of contact with its surface and the mutual relation of the speed vectors of their paths. Thus, in hitting an on-coming target, the destructive characteristics are maximized since their speeds are additive, while they are minimal when in pursuit. Therefore, as Western military experts note, when preparing for a flight, it is important to consider the proper choice of direction in approaching a target, for which it is vital to have exact data on the strike objective and its air defense system.

The foreign press emphasizes that aircraft survivability depends upon many factors, not just armor and speed. A high degree of survivability is achieved by secrecy, maneuverability and use of effective avoidance techniques. The value of the equipment is shown when using reasonable tactics. Referring to the experience of local wars, the Western press noted, that air defenses usually cover an objective from the most likely direction of an attack aircraft's approach. In the latter's technical arsenal, besides surprise (flying at an extremely low altitude), were false passes at the target outside of anti-aircraft range with a subsequent attack from the rear, decoys drawing

anti-aircraft fire upon themselves, attacks from different directions (to diffuse anti-aircraft fire), and executing counter air defense maneuvers, etc.

(to be continued)

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## CONCEPT OF AIR-LAND BATTLE DISCUSSED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 p 91

[Article by Lt Col V. Viktorov; "NATO's New Concept"]

[Text] In the fall of 1984, the ruling bodies of the North Atlantic Alliance held their fall series of conferences in the Belgian capital for the purpose of giving a new impetus to the arms race by this aggressive bloc, creating conditions for realizing the illusory hopes of the U.S. for achieving military superiority over the USSR and its Warsaw Pact allies, and compelling the NATO countries to waste still more resources on the purchase of weapons and military equipment.

Serving to achieve this are the decisions made at the conferences concerning approval of a new NATO operational-strategic concept, an additional arms purchase by the bloc's European countries in the framework of the European Group, with a significant increase in expenditures for arming the European TVD, and accelerating the deployment of American medium-range missiles in Western Europe.

The North Atlantic bloc's new concept was developed and adopted on the initiative of the Supreme Allied Commander, Europe, the American General Rogers, and received the designation "Combatting the Enemy's Second Echelon (Reserves)"---FOFA (Follow-on Forces Attack). In the press, it is sometimes called the "Rogers Plan." Underlying it is the new American "Air-Land Battle" concept which reflects the views of the U.S. command on the substance and character of future combat operations.

According to Western military specialists' statements, the concept "the battle with second echelon (reserves)" considers the main condition for achieving success to be the skillful organization of the enemy's thorough defeat on the basis of complex application of all modern resources, primarily the new long-range precision weapons, automated reconnaissance systems, target designation and communications and also EW.

First and foremost among the concepts' requirements are, that combat operations be transferred into the Warsaw Pact countries' territory from the very beginning of the war, and that the opposing enemy groupings be quickly

and utterly defeated. Thus, it is planned to inflict on the enemy powerful deep strikes with all available resources at as early a stage as possible, conduct active offensive operations, disrupt his control and supply system, persistently penetrate to the rear or go around the enemy from the flanks, and widely use air and sea landings. Thus, the main pre-requisites for the achievement of success are considered to be the destruction of the lines of communications and the defeat of the Warsaw Pact second echelons and reserves, to the maximum depth achievable, in order to prohibit a build-up of strength by simultaneously committing them to the action or battle.

At the present time, ground forces, artillery, tactical and army aviation, EW forces and resources can be enlisted to participate in "deep strikes." Here, the main role is allotted to tactical aviation which executes missions in the isolated areas of combat operations. As one sees from Western press reports, the General Headquarters is turning to the use of the newest conventional weapons, which have a staggering effect and great range and which will impart into combat operations tension, high dynamism and destructive character. At the same time, this concept, according to General Roger's announcements, does not exclude even the use of nuclear weapons by the bloc countries.

The development and acceptance of the new concept in NATO is directed at further whipping up the arms race, intensifying the aggressiveness of the bloc's existing coalition strategy for "flexible response" and the building up of tension on the European continent.

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FOREIGN MILITARY AFFAIRS

NATO NAVAL EXERCISE 'DISPLAY DETERMINATION-84' DESCRIBED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 69-72

[Article by Capt 2nd Rank V. Khomenskiy; "NATO Naval Forces in Exercise 'Display Determination-84'"]

[Text] The NATO military-political leadership views the South European TVD as one of the main bridgeheads for carrying out its aggressive designs against the USSR and other socialist bloc countries. During the numerous exercises and maneuvers conducted in this theater, different versions of armed conflict are worked out. The readiness of commands, staffs, ground, air, and naval forces to conduct military actions under conditions closely resembling combat situations are examined. The real military-political situation existing in the TVD is also taken into account. The exercises of the recent years are characterized by the wide special dimensions, range of training tasks, and the numbers of forces and resources involved. U.S. carrier strike forces take part in practically all large-scale theatre maneuvers. This clearly shows purposeful preparation of NATO naval groupings to carry out, not defensive as the NATO leadership asserts, but offensive goals. France is also playing a major role in this.

Annual fall exercises of national and unified NATO forces in this TVD are prepared under a single plan and are the general operational strategic background of the unified NATO force exercise series under the code name "Autumn Forge." In 1984, the largest in this series was the joint NATO exercise conducted from September 17 until November 15, primarily with the participation of the air and naval forces under a code name "Display Determination-84" (see drawing). The exercise region covered the Mediterranean Sea area and also Italian and Turkish territories. The intention of the exercise was to examine NATO plans for this TVD for the transition from peacetime to war, reinforcement of the NATO forces by transfer of air and ground forces units from other TVDs, and the conduct of initial stages of a limited war without the use of nuclear weapons.

Taking part in the exercise were unified and national forces' commands and staffs, individual ground forces units and detachments, the 5th and 6th Tactical Air Wings, the NATO unified and strike naval forces in the South European TVD, marine detachments, and the forces and resources of the unified

NATO air-defense system. According to foreign press reports, up to 100 ships, boats, and auxiliary craft, more than 200 aircraft from strategic, carrier, shore-based patrol and tactical aviation, and the NATO E-3A AWACS planes took part in the exercise. Besides this, the exercise force included more than 3,000 U.S., Italian, and Turkish marines.

During the exercise the following tasks were being worked out: forming and deploying task forces and task groups and the variously designated strike and unified NATO naval groups to designated combat areas; anti-submarine, anti-surface ship, and anti-air warfare to achieve sea and air superiority against the enemy; conducting amphibious landing operations; air and ship (artillery) support of the NATO ground troops on coastal axes; transit of troop reinforcement convoys under conditions of increased mine danger; organizing sea lines of communications (SLOC) defenses in the central and eastern parts of the Mediterranean.

Overall exercise command was carried out by the NATO South-European TVD Commander-in-Chief [C-in-C SOUTH], U.S. Admiral Small, through the commanders of the strike and unified forces in the regions (Central, Eastern, South-Eastern, North-Eastern). Anti-submarine aircraft actions were controlled by the commander of the unified shore-based patrol aviation in the Mediterranean through his staff in Naples.

As always, the war initiation scenario was tendentiously played out in the exercise. According to this scenario, the Warsaw Pact countries (ORANGE), the first to deploy forces in the TVD, begin military actions to achieve sea superiority, prevent normal NATO shipping in the Iberian Atlantic and the Mediterranean. Under these conditions, the NATO countries (BLUE) take "forced" retaliatory measures to strengthen their forces on the southern flank, carry out the operational deployment of naval forces to the Mediterranean and then, with the beginning of combat operations, partly destroy and then push the "enemy" out from the western Mediterranean into the eastern part by subsequent strikes and systematic actions, conduct the landing operation in the area of the Dardanelles Straits and, through the combined efforts of the naval, air, and ground forces, achieve a decisive change in the course of combat actions in the TVD.

Participating on the BLUE side were surface ships, including the American and the French multipurpose aircraft carriers AMERICA (CV-66) and FOCH R99 (the latter periodically took part on the ORANGE side in a carrier role); submarines; naval infantry sub-units; strategic, carrier-based, tactical, and shore-based patrol aircraft; forces and resources of the NATO Southern Region air defense system, and E-3A AWACS planes; on the ORANGE side, there were submarines, individual surface ships and auxiliary craft, missile and torpedo boats, as well as ground forces and tactical aviation units and sub-units. ORANGE used reconnaissance and shore-based patrol aircraft to disclose the surface and submarine situation.

Final measures for the NATO countries' national naval forces transition from peacetime to war conditions were carried out during the first stage [of the exercise]. Their combat readiness was increased and they were transferred to the operational command of the corresponding Mediterranean region naval

commanders. Special attention was given to working out tasks for deploying combat-ready forces to designated operational areas; forming variously designated task forces and task groups; detecting and tracking enemy submarines in the carriers' operating areas and in the anti-submarine approach areas in the Adriatic, Tyrrhenian, and Iranian Seas, amphibious landing training on the coast of the Teulada Bay (Sardinia); disclosure of the surface situation and tracking of enemy ship groupings, organizing all forms of ship formation defense during transit and at anchorages.

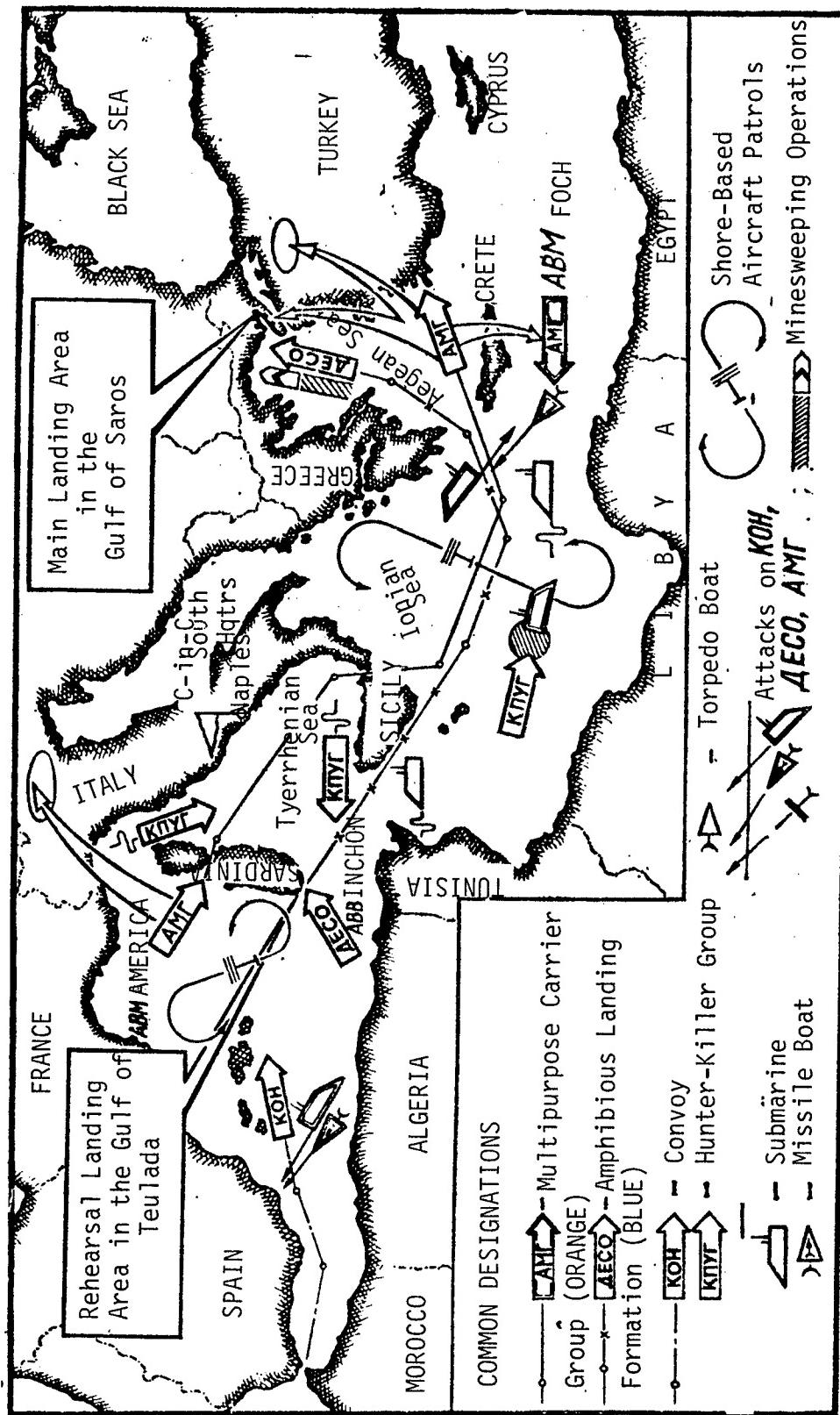
The amphibious landing was carried out from the American landing ships (including the assault helicopter carrier LDH12 INCHON (LDH-12), by amphibious landing ships dock and other means and partially by helicopters. The isolation of the disembarkation area was provided by the hunter-killer groups deployed in the straits and narrow points in the Tyrrhenian Sea. The search and destruction of "enemy" forces breaking through into the landing force's operating area was carried out by shore-based patrol planes, independently and jointly with hunter-killer groups, and also by anti-submarine ship and shore-based helicopters using dipping sonar.

In the second stage (of combat actions) the following main tasks were solved: achievement by BLUE of superiority in the Tyrrhenian, Ionian, and Aegean Seas through the successive destruction of the detected enemy submarines and surface ships; formation and combat security of the amphibious landing force during the transit from Teulada Bay to the disembarkation area on the coast of Turkey; transit of the troop reinforcement and supply convoys to Italy and Turkey; SLOC protection; provision of immediate air support to the ground forces in Northern Italy and Turkey, and also to amphibious landing forces during their landing in the straits and in the Aegean Sea narrows (according to the plan of the particular exercise "Damsel Fair").

Superiority in the Tyrrhenian, Ionian, and Aegean Seas was achieved by the combined use of strike and anti-submarine forces in cooperation with aircraft from the 5th and 6th Tactical Air Wings. At the same time, great importance was attached to the use of the anti-ship HARPOON missiles placed on American surface ships.

Hunter-killer groups, operating on the approaches threatened by submarine attacks, and shore-base patrol planes and carrier-based anti-submarine aircraft, maintained favorable operating conditions on the amphibious landing formation's transit route. The formation's air cover was provided by the F-14 TOMCAT fighters from the aircraft carrier AMERICA (CV-66) and also by planes from the 5th and 6th Tactical Air Wings from Italian and Turkish airfields. Tactical aircraft acted as a part of combat patrols on the threatened approaches.

The amphibious landing formation's transit through the Aegean Sea was conducted under conditions of increased mine danger. Minesweepers guided the ships and boats in the most dangerous mineable regions (in the straits and narrow points). Minesweepers from the Greek and Turkish navies, formed into minesweeping groups, performed the minesweeping. The scheduled minesweeping was carried out one day before the ship and boat formations passed through this region.



NATO Navies in the Exercise "Display Determination-84"

When the American amphibious landing force arrived in the Aegean Sea, it was joined by Turkish Navy landing ships, and then proceeded into the Gulf of Saros. Disembarkation of amphibious landing force (3,000 marines) on the unprepared beach was carried out by combined methods using amphibious landing ships dock and assault helicopters from the assault helicopter carrier INCHON. It [the landing] was preceded by Turkish minesweepers sweeping the approaches to the shore, air and artillery barrage by carrier and tactical aircraft and fire support ships. Operational cover of the disembarkation area and the landing force's support, during the landing and combat actions ashore, was carried out by AMERICA's carrier group. Anti-submarine protection of the landing force's anchorage and maneuver area was provided by strike groups of two to three ships each. In order to isolate the landing area, it was mined by U.S. SAC's B-52 strategic bombers.

SLOC protection was developed on a zonal principle, according to which the responsibility for convoy safety in separate regions was given to regional commanders' forces and resources. Defense of convoys was provided by the carrier task group, surface ships, submarines, and tactical aircraft.

Great attention was paid also to the following tasks: organizational control over diverse forces during naval, air and ground forces' combined operations, conducting reconnaissance; during all types of ship formation, landing force and convoy defense during transit, where they formed up and at the anchorages; and during the supply of individual ships and formations. An important role was given to the use of the E-3A AWACS planes and their assimilation of the TVD, employment of radar electronic warfare resources for destroying the enemy C3 system, and supressing his detection and fire control radars.

According to the Western press, the disagreements between Greece and Turkey about the use and status of Greek Islands in the Aegean Sea brought the refusal of the former to participate in the exercises. This decreased the scope of planned tasks being worked out in the North Eastern region of the Mediterranean. In spite of that, according to the NATO command, the exercise demonstrated the increased combat capability of the NATO naval strike groups and formations and their ability to conduct effective combat actions against the potential enemy on NATO's southern flank.

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MODERN AIRCRAFT DISPLAY UNITS DESCRIBED

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian (signed to press 11 Feb 85) No 2, Feb 85 pp 60-64

[Article by Col F. Dmitriev, candidate of technical sciences; "Multifunctional Aircraft Display Units"]

[Text] Control of a modern combat aircraft and the effective use of its armament demands from the crew reaction and analysis of vast amounts of information in a compressed timespan. Quick reaction, the ability to comprehend the multitude of instrument scales and display screens, alertness, memory, and other psychophysiological abilities necessary for this are at the present time almost at the limit of human capabilities. Foreign military specialists consider improvements in display gauges for aircraft weapon and flight controls to be one possibility for solving this problem. According to them, the key approach for improvement lies in reducing the information flow transmitted to the crew, in other words, creating data display systems which would permit maintaining constant data flow in amounts optimal for human processing (according to contemporary views, it is up to 10 bites/sec.), while at the same time retaining the capability to recall considerable amounts of additional information about practically any aircraft system in case of an emergency.

This is realized to the most complete degree, in so-called multifunctional displays which allow the crew to solve simultaneously tasks of aiming and laying weapons, navigation, flight and landing control, tracking engine operational conditions, etc.

It is considered that in order to achieve multifunctionality, the data display system has to be tied in with a large number of data receiving sources (infrared, radar, lasers for reconnaissance and safety of flight, aircraft position sensors, status gauges, navigation instruments, onboard computers, and others). Display equipment designed on the basis of the digital technology widely used in information transmission devices, its processing and control by display processors is most appropriate for this task. The foreign press notes that the use of digital methods permits the cost, weight and size of a data display system to be reduced significantly. This is especially important for the equipment on board military aircraft and helicopters.

In designing multifunctional displays, the primary thing to consider is the requirement to combine human operation psychophysiological abilities with the kind of display and the amount of data to be displayed. The method of presenting data is in turn defined by sensor type, that is, the source from which information for display is transmitted. Reconnaissance and observation sources--radars, infrared, lasers, and television facilities, which provide detection of air and ground targets and receive a ground (water) surface image, belong to the first sensor type. In modern equipment, transforming data from analog to digital type is, in most cases, carried out by the sensors themselves.

The second type of sensors are navigational means, life-support systems, engines operations control instruments, etc. The onboard computer is usually used to transform the information distributed by these equipments into alphanumeric or conventional form. The third type of sensors are: gauges for measuring the aircraft's spatial position and also long-distance command flight guidance receivers. In this case, for the most part, data given to the pilot (operator) are displayed in conventional symbols and signs and sometimes are combined with information concerning the air situation in vertical or horizontal planes. A computer also effects their transformation.

In order to achieve more optimal information display distribution, the cockpits in the most modern aircraft are equipped with multifunctional displays of two types; on one, data are displayed on the windshield [heads-up display], on the other, they are displayed on the instrument panel. The first type is designed primarily to support pilot actions demanding maximal reaction, for example during the use of weapons or landing. On the screen of such a display, data on operational flight conditions, navigation, direction of weapons aiming, position of a glide path and landing strip are produced against the background surrounding the aircraft in its forward hemisphere. Sometimes this picture is supplemented with information from radar, infrared, and television systems, which interact with the objects observed by the pilot.

Navigational problems are usually solved by displays located on the instrument panel. As a rule, this screen displays data extracted from the forward-scanning radar system and the meteorological radar, which is superimposed on the image of the topographical terrain map which is synchronized with the aircraft's movement. In recent years, according to Western press reports, the information provided on such a display began to be supplemented by data on engine operation status, its fuel system, and also duplicated by information concerning the aircraft's spatial position. All of this information is lighted up on the display screen in a form of alpha-numeric markings and conventional signs.

Regarding the general design requirements for the design of data display equipment that take advantage of human visual capabilities, foreign specialists put the clarity of the image and its resolution in first place. The main task in providing adequate image brightness is to recognize the vast changes in the limits of lighting intensity in the pilot's cockpit, which can range from 100,000 lux under daylight conditions to 0.10 lux at night. It is noted that characteristics of the existing types of display equipment, such as cathode-ray tube, light emitting diodes, liquid crystals, plasma panels,

electroluminous and piezoluminous equipment do not completely satisfy these requirements. This task becomes even more complicated by the eye's adaptive capabilities in cases when fast changing and characteristically different data must be presented to the pilot.

With regard to resolution capabilities, foreign researchers determined that humans are capable, with 0.95 probability, of locating markings around 2 mm in diameter when observing the 40 x 40 cm screen from the distance of 60 cm over a 10-second period. Such screen resolution is achieved by using sweep containing 350 elements per ordinate. It is considered that at the present time, cathode ray tubes with digital address control, satisfy the above requirements to the best degree.

Usually, the screen of multifunctional data display presents data from 10 to 15 sensors. To do this, five to eight parameters are displayed with the help of digits and scales and provide quantitative evaluation of information available to the pilot. The remaining parameters, appearing as conventional signs and symbols, provide qualitative evaluation, in particular, the aircraft's spatial position relative to the earth's surface, its armaments, or landing strip, and also operational conditions of different on-board systems.

If the displayed data is highly important to mission completion (for example, remaining ammunition supply) or, there is a possibility that the pilot can confuse it with other information (because of close proximity of data or relatively seldom display of some parameter), it is followed by explanatory letter markings.

The screen of the multifunctional display practically always has a rectangular or a nearly-rectangular shape. The whole area of the screen is divided into two regions: peripheral and central. In the first one, data are displayed in a form of changing numbers and numbered scales with moving indicators, and in the central region there are conventional signs based either on the air situation, as visually observed by the pilot, or on the data from the on-board radar, infrared, or television station.

On most data display units which are projected on the front windshield, the upper and lower peripheral parts of the screen are assigned to data about course, pitch, angle of attack. The speed scale is usually placed on the left, and the distance or altitude scales are placed on the right. Sometimes near the left and right scales, additional information is displayed in digital form, for example, on the left side are aircraft speed in mach numbers, acceleration, weapon data (numbers and types of missiles, bombs, etc) and on the right side, the distance to the target, estimated time of missile flight to target. Obligatory display elements in the central part of the screen are the aircraft indicator and the horizon line. Other conventional indicators change with a change in operational display routine (weapon use, landing, etc.). When shifting to the use of weapons, additional target indicator marks, sight cross hairs and data columns necessary for pilot's weapons aiming and calculation of the moment for most effective weapon firing or bombing approach, usually appear on the screen.

Below are given examples of images formed on display screens which display data the front windshield of the American F-15 fighter and the French MIRAGE-2000. In part, dynamics of data changes on the display screen of the F-15 aircraft during aircraft cannon firing and bombing is shown in Figs. 1 and 2

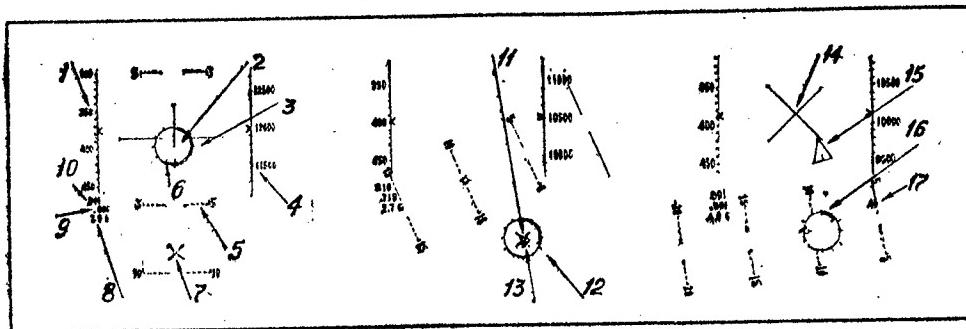


Рис. 1. Динамика изменения данных на индикаторе самолета F-15 при стрельбе из бортовой авиационной пушки по воздушной цели: 1 — шкала скоростей (в узлах); 2 — прицельное кольцо; 3 — метка максимальной дальности стрельбы из пушки; 4 — шкала высот полета (в футах); 5 — шкала углов тангажа; 6 — дальность до цели по данным РЛС; 7 — метка целеуказателя (РЛС, ИК станция и т. п.); 8 — величина перегрузки; 9 — скорость в числах  $M$  (в данном случае  $M = 0,699$ ); 10 — имеющийся боезапас (патронов); 11 — метка возможности ведения эффективной стрельбы из пушки; 12 — дальность до цели в пределах дальности ведения эффективной стрельбы; 13 — цель находится в центре прицельного кольца; 14 — метка выхода цели из зоны эффективной стрельбы; 15 — цель; 16 — дальность до цели; 17 — расчетное количество попаданий в цель

Fig. 1. Data Change Dynamics for the F-15 Display Unit While Firing the onboard cannon at an air target.

- |  |   |
|--|---|
| 1. Speed scale (in knots).                       | 10. Existing ammunition on hand (rounds)                      |
| 2. Aiming circle.                                | 11. Mark of possibility for conducting effective cannon fire. |
| 3. Maximum gun range mark.                       | 12. Target range and effective fire range limits.             |
| 4. Altimeter (feet).                             | 13. Target positioned in center of aiming circle.             |
| 5. Pitch angle scale.                            | 14. Target escape from effective fire zone mark.              |
| 6. Radar target range.                           | 15. Target.   |
| 7. Target designator (radar, IR, etc.).          | 16. Target range.   |
| 8. G-force value.                                | 17. Calculated number of hits on target.                      |
| 9. Speed in Mach No. (in this case, $M=0.699$ ). |   |

respectively. In the first position in Fig. 1, the display screen is shown at a moment when on-board radar locked on target and tracks it automatically. The radar range to the target is far greater than effective cannon firing range, and the target itself is not visually observed by the pilot. In such conditions, the pilot has to control his airplane in such a way so as to keep the sight circle on the radar target mark (shown as a vertical line in the center of the screen) and then combine the center of the circle with the radar marker ("X" sign) and close the enemy plane. Performing the maneuver, the F-15 fighter is flying at a pitch angle of  $0^{\circ}$  at 12,000 feet altitude (about 3,700 m), and at a speed of 375 kts (about 700 km/hr) with acceleration of 1 G, with 940 round of ammunition.

The second position in Fig. 1 corresponds to the moment when the F-15 closes the enemy plane to the distance of effective cannon firing range and opens fire. Shortly before this the enemy began a sharp maneuver evading to the left and down. The pilot of the attacking plane keeps the central circle sight marker on target, seen visually, turning left with pitch angle 100°, speed 400 kts (740 km/hr) and acceleration 2.7 G. At this moment, the pilot was able to fire 24 cartridges. The F-15 is at an altitude of 10,500 feet (3,200 m).

The next figure in the drawing shows a view of the screen where the target, after being fired at, is undamaged and, as a result of maneuvering, gets outside the limits of effective cannon range. If the distance to the target and also if mutual spatial position between the interceptor and the target becomes such that the pilot is unable to complete repeat lock on target, then in the center of the screen a large cross-like sign appears and under the altitude scale the number of calculated target hits as a result of rounds fired is displayed. The screen shows a similar view if the plane approaches the target at very high speed. Having received this information, the pilot of the attacking plane has to stop chasing the enemy and complete a new approach on the target.

In Fig. 2, the first position corresponds to the beginning of bombing, when the plane is manually controlled. On this drawing at the upper part of the

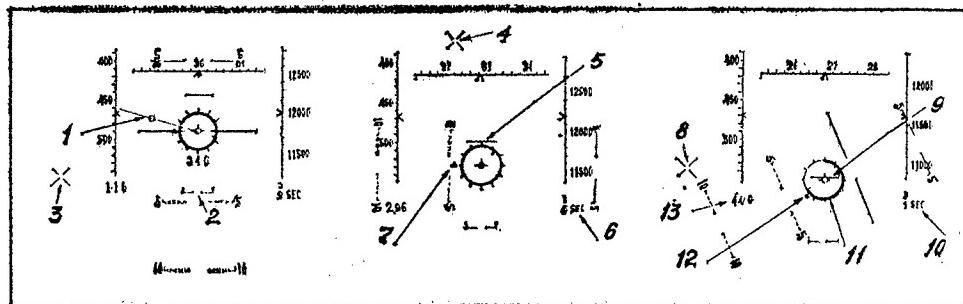


Рис. 2. Динамика изменения данных на индикаторе самолета F-15 при бомбометании обычными бомбами: 1 — метка ручного управления; 2 — метка набора высоты; 3, 4 и 8 — метка целеуказания; 5 и 9 — метка сброса бомб; 6 и 10 — время, оставшееся до момента сброса бомб (в секундах); 7 — требуемая дальность до цели при сбросе бомб; 11 — дальность до цели; 12 — требуемая дальность до цели при сбросе бомб по данным расчета бортовой ЭВМ; 13 — величина перегрузки

Fig. 2. Schematic of Data Changes on F-15 Instruments During a Bombing Run.

- |                               |  |
|-------------------------------|--|
| 1. Manual guidance controller | 6, 10. Time remaining to bomb drop (sec)         |
| 2. Climb indicator.           | 11. Range to target.                             |
| 3, 4, 8. Target designator.   | 12. Required range to target for dropping bombs. |
| 5, 9. Bomb drop indicator.    | 13. G-force value.                               |

screen is a new scale on which the plane's true course data, measured in ten degree increments, is lighted up. Moreover, under the altitude scale there are displayed; the number of bombs to be released, flight time to bombing target (in seconds) and four conventional signs: release marker (in a form of a

straight line above sight circle), altitude climb marker ("brackets" under the circle), manual control mark (small sized square crossed by a line beginning in the center of the circle, whose angle position corresponds to target bearing relatively to the aircraft), and bomb range release marker in a form of triangle on the distance scale on the sighting circle. If the target is located outside the pilot's vision limits, then the target indicator marker, located on the border of the screen, begins to blink. Under the circle the computed acceleration rate during the aircraft's flight over the bombing point lights up.

Based on these data, the pilot has to control the aircraft in such a way that the manual control marker coincides with the circle's center, and the bearing marker's line assumes a vertical position, after which, the automated process of leading the aircraft to the calculated bombing point begins, using commands from the on-board computer. With this, the bombing point marker will begin to move in the direction of the circle. The last drawing in Fig. 2 corresponds to the time immediately before bombing: bombing point marker is located almost in the center of the circle, true target range, displayed on the outer side of the circle, somewhat exceeds the value of calculated bombing range, which appears as a dot on the range scale: one second remains until the three bombs are to be released.

The conventional markings on the multifunctional display screen of the Mirage 2000 fighter (Fig. 3) is an example of the greatest improvement in this type of technology in the direction of greater condensation of information given to the pilot. The main technical prerequisite in designing such a display, according to the Western press, is maximizing the capability of the on-board computer to calculate flight data and performance of the aircraft's operational systems. This makes it possible to free the pilot completely from having to evaluate numerical data, replacing it with highly informative conventional marking on the display. In the upper part of the screen in the form of numbers are displayed the aircraft's course, air speed (V), barometric altitude (Z), and altitude according to radar altimeter (H). When the aircraft reaches the assigned altitude (through radar altimeter data), its reading is automatically moved into the lower part of the screen.

The other main elements in data display are the conventional markings in the form of vertically-located square brackets with signs. Their height changes showing the limits of optimal angles of attack under the specific flight conditions and, through the marker positioning, the pilot determines the possibility of performing attack maneuver under such angles. So, if the marker is located above the bracket, it means that the engine has enough reserve thrust to complete the optimal turn, and if the marker is located under the brackets, then the plane will lose altitude during the turn. Using such effective conventional signs, the pilot can effectively control the fighter plane not only during the chase of an enemy plane, but also use instruments for staying on the glide path while landing.

The target tracking marker and landing strip symbol are also conventional signs in the form of correspondingly vertical lines and right trapezoid, the radio beacon or the glide path are displayed in a form of square. Moreover, there are many of the same symbols observed in the display units for the F-15

and on the French fighter, such as, the illuminated line for the artificial horizon, the pitch angle scale and the plane marker.

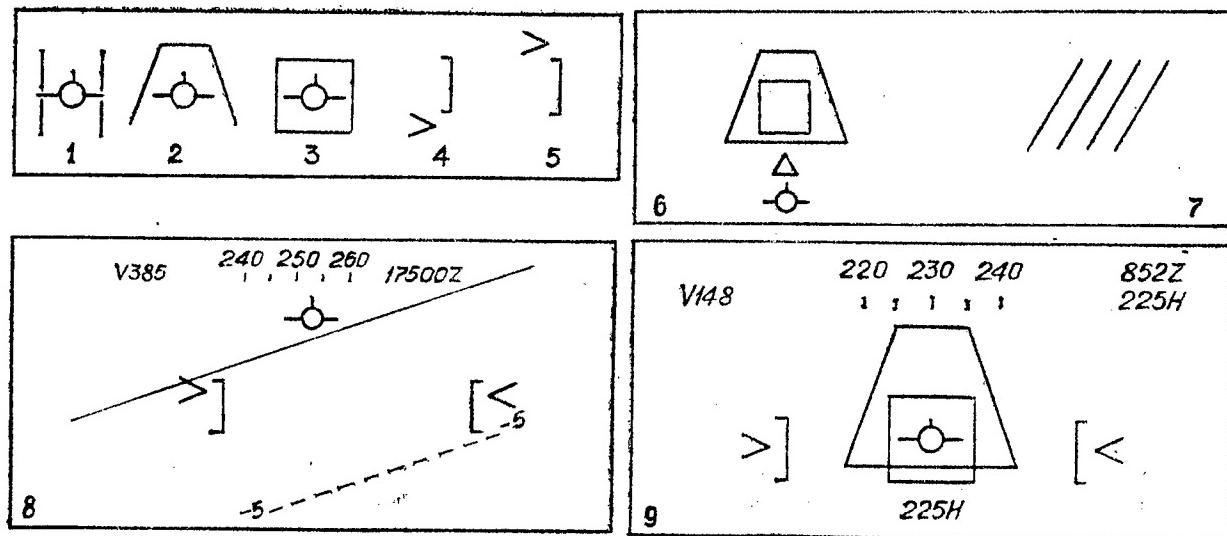


Рис. 3. Условные обозначения на индикаторе самолета «Мираж-2000»: 1 — метка наведения самолета по курсу; 2 — метка вывода самолета на цель; 3 — метка вывода самолета на глиссаду; 4 — запас тяги двигателя недостаточен для выполнения маневра; 5 — запас тяги избычен для выполнения маневра; 6 — метка требования набора высоты при заходе самолета на посадку; 7 — символ неисправности системы, вырабатывающей данные для отображения; 8 — пример основных условных обозначений на экране индикатора; 9 — вид экрана индикатора в режиме захода самолета на посадку

Fig. 3. Representative Symbols of the MIRAGE-2000 Instruments.

- |  |   |
|--|---|
| 1. Aircraft course marker.                                       | 6. Mark for climb requirement during landing approach.                              |
| 2. Target approach marker.                                       | 7. System malfunction symbol, developing data for display on the instrument screen. |
| 3. Glide path marker.  | 8. Example of the key representative symbols on the instrument screen.              |
| 4. Reserve engine thrust is insufficient for maneuver execution. | 9. View of instrument screen in landing approach mode.                              |
| 5. Thrust exceeds requirements for executing maneuver.           |   |

One of the special features of this data display is that with its help the pilot is informed in a timely manner concerning dangerous flight conditions and the proper functioning of some of the on-board systems. For example, if the plane is flying below its glide path, a blinking marker, in the form of a triangle, appears under the landing strip symbol. In case of a malfunction of the system providing output for some sort of display data, the corresponding conventional sign will be replaced by shading this part of the screen.

The foreign press notes that the principles of forming the conventional signs for displays located on the instrument panel are basically the same as the heads-up displays. The main difference is that the data is superimposed, not on the real situation observed by the pilot, but on the radar image (usually for the vertical situation displays) or on the moving terrain map (in case of navigational displays). The radar image can be displayed in various coordinate systems (most often in the rectangular or polar coordinates), and sometimes a pseudoperspective image of the earth's surface, providing a method for instrument landings, is formed on the vertical situation display with the help of the computer. On the most modern displays, the image from the radar or the forward-looking infrared system can be combined with the background of the topographical map.

The Western press has given some possible directions for improving multifunctional displays. It is supposed, for example, improvement in optical equipment ought to expand the pilot's field of vision, provide greater potentials for computer-controlled displays, and allow forming conventional signs and letter-digital data on the image backgrounds received from the infrared station and the television cameras working at low levels of illumination. Large scale efforts are underway to design special, highly-transparent glass for observing the surrounding situation. Large opportunities are opening up with the mastering of technologies for manufacturing screens which can create multicolor images. In the longer-term perspective, definite hopes have been raised for the creation of displays with stereoscopic images.

The foreign military specialists emphasize that the materialization of the above discussed trends in multifunctional aviation displays improvement will significantly increase the combat capabilities of military aviation in performing its assigned tasks.

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AFGHANISTAN

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21 JUNE 1985

OFFICER'S EXPERIENCES IN DRA

PM081454 Moscow KRASNAYA ZVEZDA in Russian 4 May 85 second edition p 3

[Reportage by KRASNAYA ZVEZDA correspondent Captain A. Kovalev under the rubric "Heirs of the Front-line Soldiers": "Such High Mountains"]

[Text] That was that. The turbines burst into a howl, the fuselage trembled, and the aircraft began its takeoff...

Captain Zaytsev was airborne. He looked through the porthole. The ancient land, its green valleys showing between the folds of the mountains, was already slipping away far beneath him. The new life was being built there; the struggle was continuing there. He had left a part of his heart in that land. He was taking away in his heart the joy and pain of its people. And he heard in the monotonous roar of the engines other sounds, both ordinary and disturbing...

The whistling mountain wind beat against the sides of the staff tent, telephones buzzed incessantly, and the voice of major Vladimir Usmanov, commander of the motorized rifle battalion, was getting hoarse from giving reports and orders...

He unfolded the map and brought Capt Zaytsev up to date with the situation. Subunits of Afghan and Soviet soldiers had been ambushed in a mountain ravine while on a march, and were now defending themselves in an unequal battle with the attacking Dushman gang. This had happened not too far away, but the terrain was difficult. Zaytsev was ordered to head a group and rescue his comrades.

Zaytsev went out of the tent. The purple dawn was breaking on the horizon. Soon the group was on its way.

Initially their way led through a valley. The valley was foggy, and the atmosphere was tense. It was easy to move, but painful to look around. Rice paddies were dying of thirst all along the road. Nature had always been miserly there. But people did not complain. They labored. And nature, placated by their diligence and persistence, became more generous. But the cruel voice of the undeclared war waged against the Afghan people by gangs of counter-revolutionaries and mercenaries made itself heard there too. Explosions rumbled, playing havoc with the irrigation canals. Dushman bullets spilled the peasants' blood, while the voracious flames of sabotage consumed the grain reserves...

Capt Zaytsev heard senior Sergeant Mikhail Razdevayev, who was marching next to him, sigh sorrowfully. He was young in years, but his life was "that of a man and not a teenager." He came from a long life of grain-growers and combine operators. He had been awarded the order of the labor red banner. You could listen spellbound to his tales about his native place, about the festive freshly-baked loaves from the new harvest smelling of summer, home, and rest...

But bread can also smell of gunpowder. Zaytsev and his subordinates had on numerous occasions escorted convoys carrying provisions. They learned, sometimes to the whistle of bullets and the explosions of mines, the truth that bread is life. It was life for those to whom it was being taken. It was also life for those who were taking it there. And he would never forget how the grain would run like blood from a wound from the bullet-riddled truck bodies and how they would rush to plug the holes.

As they emerged from the valley, the servicemen heard the rumble of tractors. Looking more closely, they saw a "Belarus" workhorse in the swirling fog and peasants working nearby. That meant that grain was being planted in the soil instead of lead, and that life-giving water would rush along the irrigation canals.

They started climbing. The brown strip of the mountain path would almost to the very summit of the ridge. The sun was getting hotter, its rays seemed to be urging them on from behind, and sweat dried white on their jackets. The group was hurrying along. Soon, however, sapper private Viktor Lomov detected a mine. He was an experienced specialist, but Capt Zaytsev's heart missed a beat when the soldier began his dangerous work,

Viktor Lomov has a young son. He was already over a month old at that time. The happy news of his birth had reached the soldier far from his home subunit, at a time when he, together with a group of sappers, was performing a mission to defuse dushman mines. Late in the evening, an armored personnel carrier had unexpectedly trundled up to them. Capt Zaytsev was the first to get out. The soldiers had greeted the officer with anxious looks. But he was looking for someone with a merry twinkle in his eyes.

"We have had reinforcements. The Lomov clan has a new arrival," he announced when they had all gathered together. And he presented the new paterfamilias with a telegram.

"Thank you, Comrade Captain," was the only reply Viktor Lomov could come up with.

"Write thank you to your wife," Zaytsev smiled.

...they were on their way again 15 minutes later. Some 300 meters further on, they stopped again: mines.

"A trap," Capt Zaytsev thought, "we'll never manage like this." The bandits had blocked the way to the ambushed subunits. So far with mines. It could not be ruled out that the group would find itself under fire on the approach to the ravine. Zaytsev looked at the map. And he saw that there was no other way. Only through the mines. Only under the bullets.

Capt Zaytsev is not used to succumbing to circumstances. The Leningrad Higher All-Army Command School had given him a different tempering, and the expression "hopeless situation" was not a part of his vocabulary.

He no longer remembers precisely when it was that the dream of becoming an officer grew in his heart. But he does remember who it was that planted the seed. His father Nikolay Vasiliyevich. The flames of the front line never reached the settlement of Semibratovo in Yaroslavl Oblast, but people from it marched along the paths of war until victory. Infantryman Nikolay Zaytsev was one of them. The father spoke little about his front-line experiences. Much more about his comrades-in-arms. But the son's lively imagination supplemented those modest tales. He kept peeping into the closet where his father's old-fashioned soldier's greatcoat was hanging, and raptly fondled the front-line decorations... and Sasha saw in his mind's eye the pillars of earth rising skywards during crushing artillery barrages, desperate attacks, racing tanks...

Initially, however, the school brought disappointments. And the slightly ironical baritone of his favorite instructor, Lieutenant Colonel Anatoliy Vasiliyevich Kiryakov, during field exercises:

"As you see, Cadet Zaytsev, you made the wrong decision. Shall we put matters right?"

Cadet Zaytsev, playing the role of company commander, would have been only too happy to put matters right, but how?

"So what are we going to do, Cadet Zaytsev?" -- the leader of the exercise asked more sternly.

"We'll learn, Comrade Lieutenant Colonel," the unlucky "Company Commander" sighed.

"You may have lost almost all your 'forces' but you still have not lost your optimism. That's not bad," the instructor's soft smile signaled approval and support.

Time was to pass. There were to be victories. There were to be also defeats. There were more of the victories. But Cadet Zaytsev learned to live with failures, understanding that they cannot be avoided along the thorny path of professional advancement and that they can also be beneficial if conclusions are drawn from them.

Capt Zaytsev put down the map. And immediately the mountain echo brought to his ears the sounds of gunfire, dulled by distance: another firefight had broken out in the ravine. Zaytsev racked his brains for a solution.

"We can go, comrade captain," Private Lomov reported wearily.

"We can go, but we don't have to," Zaytsev said, having formed his group. "They're waiting for us along this path. We'll go this way," and he pointed firmly in the direction of the mountain top.

The sun was approaching its zenith. They rushed up the steep cliff, breaking their fingernails, grazing their knees until they bled, and pressing their faces against the abrasive granite surface. But the top was still far away, and their strength was running out. Capt Zaytsev and the soldiers could hear the echo from the ravine beyond the rocky crest, the chatter of submachineguns and machineguns and the crack of rifles resounding from the rock. Their comrades were awaiting help there. And they conquered the mountain, they could not do otherwise. They were led onward by duty and conscience.

The group literally descended on the dushman's heads. And released the dushman's trap.

Later, when it was all over, Capt Zaytsev looked at his watch and saw it had stopped. Either a bullet or a piece of shrapnel had smashed the "elektronika." "Pity about the watch, but I'm glad it saved me," Zaytsev thought. And he also thought that there, in the ravine, time had stood still. Or rather, it worked against those who came to burn, plunder, and kill.

Capt Aleksandr Zaytsev said farewell to the subunit 1 and 1/2 months later. They stood face to face, looking at each other, the commander and his subordinates. Capt Zaytsev was gripped by emotion: he had prepared a farewell speech, but could not begin. He wanted to speak about past experiences, about the long and difficult path they had traveled together, about the fact that the glow of his order of the red star showed the warmth and bravery of their hearts...

Capt Zaytsev looked from one face to another. Privates Nikolay Shvaykovskiy, Makhmut Baknazarov, Vladimir Malikov...

Incidentally, Malikov had said recently that he intended going to a military school. A command school, without any doubt. Smiling, he had explained: "This is now in my blood." Everyone understood the hint. He had been wounded during the skirmish in the ravine. A direct blood transfusion had to be done at the medical battalion.

The soldier's commander was the first to give blood.

Senior Ensign Valeriy Kapirin. A loyal, reliable comrade. On one occasion they avoided driving into a ravine only by a miracle. But that miracle was accomplished not by blind chance, but by him, Kapirin.

The winding mountain road, like a ribbon unrolled from the summit, was rushing beneath the truck's wheels. Kapirin, who was at the wheel, glanced at Zaytsev and said:

"In 10 minutes we'll be down in the valley." And he deftly swung the vehicle into the next curve. A muffled blow hit the underside 5 minutes later. Kapirin stepped on the brake pedal but the brakes, sensitive and obedient until then, did not "catch." He stepped on the pedal once more, flooring it completely, but the vehicle hurtled toward the curve like a torpedo. At that instant they heard a grating and screeching noise; Kapirin was trying to reduce

speed by changing into a lower gear. They rushed into the curve, sending a shower of stones into the gaping abyss...

"That's what you might call a motor rodeo," Senior Ensign Valeriy Kapirin tried to joke when it was all over. But he couldn't light his cigarette, the matches kept breaking...

The comrades would describe this as composure, as courage. And they would help Kapirin and Zaytsev "straighten out" the gear box and replace the brake cable, which had been damaged by a stone (a most rate occurrence!). But trials are trials because they do not involve ordinary situations.

They stood face to face, looking at each other. There was much to remember. And Capt Zaytsev suddenly felt that words were not even necessary. He could simply remain silent.

Capt Zaytsev went to the long distance telephone booth in Tashkent after landing there. It had so happened that he was able to partly determine his next service posting. He had made his choice without hesitation. He was no longer able to live in a quiet place. He was by no means calm when he told his wife Nadya about his new post. Do you remember, he said, you have always wanted to live by the sea, now you'll have it your way.

"Not by the Black Sea, I hope?" Nadya's voice conveyed a merry irony; she knew her husband only too well.

"Of course not," Aleksandr answered cheerfully. "The White Sea."

Zaytsev left the telephone booth smiling. He was understood, loved, and awaited.

Then it was his turn to wait. Beneath the glass dome of the northern city's railroad station. Women looked at the young officer with interest, men with envy. The winter had pushed the thermometer below the 30-degree mark, but delicate carnations glowed in his hands.

Zaytsev himself was looking at his watch. Frequently and impatiently--the train was late.

At long last the train drew up at the platform. There was the carriage he wanted. He doors opened and let out the cozy warm air. Then Aleksandr saw his family.

"Mummy, look at the snow!"--his small daughter chirped.

"Look at the flowers!"--the conductress exclaimed.

"Hello my Zaytsev," his wife repeated tenderly...

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AFGHANISTAN

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21 JUNE 1985

ARTICLE NOTES GUERILLA USE OF ANTI-AIRCRAFT ROCKETS

Moscow KRASNAYA ZVEZDA in Russian 25 Apr 85 p 1

[Article by Maj A. Oliynik, Special KRASNAYA ZVEZDA correspondent: "Mountains Under the Wings"]

[Text] The hot air blows. The AN-26 stands on the tarmac ready to take off. The aircraft commander, Capt Yuryi Karaulov, positioned his throat mike with a practiced movement.

"This is 47 035. Request permission to take off?"

"You are cleared to take off..." I, too, hear the controller's voice in my headset.

We take off at a steep angle and gain altitude. The aircraft leaves an inverted smoke trail arc.

"Today is a special flight for us," Warrant Officer Valeriy Denisyuk, the aircraft radio operator says on the intercom. "We have been flying in Afghan skies for exactly seven months."

Capt Karaulov's crew, like many others, has flown thousands of kilometers over Afghanistan. It has become necessary to deliver provisions to many areas where the Dushmans have destroyed the food reserves. They have flown in severe weather, landed on desert clay cracked with heat, taken off from mountain strips hardly larger than a football field and have been fired upon.

Today we are flying to Jalalabad, the Nangarhar Province center. On board are containers with national economy cargo. In a word, this is a milk run. The only usual thing about the flight is that part of the route is over territory where Dushmans have recently appeared.

Under the wings are the majestic mountain tops and the blinding glare of glaciers.

"The Targar Mountains," explained the navigator, Sr Lt Igor Shunin. "They are called the Black Mountains. We were fired on here..."

There are five men in the crew. The very experienced commander, Capt Yuryi Karaulov, is a second class military pilot and has flown more than 1000 hours.

The remaining officers are senior lieutenants. The son of a combat veteran, right seat pilot Viktor Palyakov recently graduated from the Balashovsk Higher Military Aviation Academy for Pilots imeni Glavnnyy marshal aviatsii A. A. Novikov. Igor Shunin acquired his military profession of navigator in his native Voroshilovgrad at the Higher Military Aviation School for Navigators imeni Proletariat Donbassa. Flight Engineer Pavel Shabanov graduated from the Military Aviation Engineer School 2 years ago.

While listening to the businesslike exchanges among the crew, I remembered another group of transport pilots with whom I happened to fly in the Afghan sky. Bearer of the Order "For Service to the Motherland in the Armed Forces of the USSR" Third Class Major B. Rafikov and Major B. Bezmenov who had been awarded a medal for "For Combat Merit"... They fly a great deal, from dawn to dusk. Each flight is a small but important contribution to strengthening this young republic. Therefore, counterrevolutionary bands are trying to disrupt air communications in the country which Soviet aviators are providing along with Afghan fliers.

I had a conversation with the Chief of the Afghan Air Force Political Department, Col Mukhamed Hakim. He said:

"Recently, in addition to small arms, the Dushmans have received mountain anti-aircraft pieces, air defense missile launchers, and surface-to-air missiles from abroad.

"In contrast to military cargo planes, helicopters fly in pairs. Our Mi-24 repeated all its turns in the narrow canyon. It was as if it were getting use to the smell of the mountains. Looking at rock which has been standing solid for ages, one can forget that the mountains often conceal Dushmans and that a heavy machine gun could strike from a cave."

The helicopter commander, Capt Anatoliy Zaplatnyy, continuously keeps this in mind. At danger points the aircraft performs air defense missile avoidance maneuvers, soars to the top of the "hill" and hugs the rock. The operator pilot, Sr Lt Sergey Bekasov, and the flight engineer, Sr Lt Nikolay Onishchenko, grip the machine gun handles tightly.

"Capt Zaplatnyy is a master pilot," said Lt Col T. Nurgaliyev, bearer of the "For Service to the Motherland in the Armed Forces of the USSR, Third Class" before the flight. "He flies in any weather."

The crew commander's outward appearance is nothing like an air ace. There is a constant soft, bashful smile on his face. He is a native of the village of Novoselitso in the Chernovitsa Oblast. In 1980 he completed the Syzranskoye Higher Military Aviation School for Pilots imeni 60 letiya SSSR. Here, in Afghanistan for the second time, he has flown 700 hours and has been awarded the Order of the Red Star.

Many have received this award. Here every day is an ordeal. Wind and the hot sun burn faces. By evening, jackets are hardened by the sun. A blue flight suit rapidly becomes a pale, light blue.

The mountains are unforgiving. Sandstorms, the impetuous "Afghan," landing on the tiny landing zones in the mountains... Rotary wing aircraft crews are accustomed to all this.

Hero of the Soviet Union Lt Col V. Ochirov; bearer of the Order of the Red Star Maj V. Zverev; Capt N. Pyrin; Capt V. Vasil'yev, and many other communist helicopter pilots are known in the military garrisons and the villages of the most isolated mountain regions. The enemies of the Afghan people are also familiar with their "signature." The aircraft with a red star always return precise fire on the Dushmans small arms and missile attacks.

...With a sharp turn we make our landing approach. And at the other end of the airfield a new pair of aircraft rise in the threatening sky.

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AFGHANISTAN

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21 JUNE 1985

WEEKLY DESCRIBES TRAINING OF AFGHAN REBELS

LD222200 Moscow TASS in English 2114 GMT 22 May 85

/Text/ Military aid to Afghan counterrevolutionaries by the United States and some other states, hostile to the Democratic Republic of Afghanistan, is steadily on the rise, writes the weekly NEW TIMES in its latest issue. The weekly cites the newspaper WASHINGTON POST as saying that American secret aid to Afghan counterrevolutionaries is now the greatest ever since the time of the war in Vietnam. Two hundred and fifty million dollars are to be allocated to the Central Intelligence Agency this year for "Afghan operations," this sum accounting for more than 80 percent of the CIA's expenditures for secret operations.

Counterrevolutionary ringleaders, as a rule, order weapons from firms which are engaged in international trade in arms, the weekly points out. Reactionary Arab regimes also pay for U.S. deals, remitting money on behalf of different "funds of solidarity with Afghanistan." More than 100 depots of arms and ammunition were formed in areas of dislocation of the main camps and headquarters of Afghan counterrevolutionary groupings in Pakistan.

A network of intermediate depots has been established in direct proximity of the Pakistani-Afghan frontier. From those depots armaments are transferred directly to Afghanistan, writes the NEW TIMES. Caravans with deadly cargo use more than 200 routes. Escort groups use mounted patrols and radio transmitters for communication. Passages are made predominantly at night time. Last year frontier troops and units of the Afghan Army captured and rendered harmless more than 25 big transport columns.

Top leaders of big bandit formations are trained at higher and secondary military education establishments of Pakistan. Specialized training centers were set up to train ringleaders, instructors, military specialists (scouts, saboteurs, antiaircraft gunners, mortar gunners, miners, wireless operators).

Big training formations of Dushmans, with an army structure, are being formed on the territory of Pakistan. Thus, a "regiment of 4,800 men is based in the Mamadgart settlement. Instructors from the United States and some other countries conduct military training there. The term of "service" is 2 years. Each "soldier" gets 4,000 afghani a month--double the sum that the average Afghan worker gets per month. Fifty-five thousand men can be trained at military training centers at a time.

Such are the proportions of the undeclared war now being waged by international reaction against the revolutionary Democratic Republic of Afghanistan, the weekly stresses.

AFGHANISTAN

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21 JUNE 1985

PAPER DESCRIBES AFGHAN REFUGEES' RETURN

PM230920 Moscow KOMSOMOLSKAYA PRAVDA in Russian 21 May 85 p 3

/Article by Kh. Yusupov: "Afghan Reportage": 'The Way Home'"//

/Text/ ...For 25 days now (Khodzhiddin Mukhammad) had been waiting at the border. He was eagerly awaiting the moment when he would see his motherland again.

Suddenly the police officer whom he had bribed--with 3,000 afghanis--gave him the signal: come to the border.

He took his last steps on foreign soil. Ahead of him lay his motherland, his native speech, his fellow countrymen.... Next to him were his wife and four children, aged between 3 and 10 years. Half-starved, dressed in rags, dirty, and frightened. How would he be greeted at home, how do people live there?

They were met by border guards who fed them, gathered together a few things for the children, and promised them transportation to take them from the border crossing at Spin Buldak to Qandahar. From there it was only a stone's throw to their home village. Land confiscated from the feudal landlords awaited them there.

The 3 years of privation, suffering and illness in a foreign country, 3 years of humiliation and mockery at the refugee camp, had not killed the old pushtun's pride. Nonetheless, curiosity was uppermost in his mind. Take for example the soldier who was so freely talking with the officer. He was very polite to his family, eagerly answering their questions. It was hard to believe that (Kholmir), a nomad from the (Maryanay) tribe, was a sergeant at the age of 21! Especially as he had previously served in (Tozagula's) Dushman gang. He had spent almost a year with the Dushmans in the mountains before he finally realized how exactly they "protected" Islam: the gang leader murdered (Kholmir's) brother and took his wife and property. (Kholmir) had his revenge: he captured two of the cruel (Tozagula's) deputies and went to the district security service committee. For 3 years now he has been serving in the border guards. He has quite a few exploits to his credit, and has been recommended for the medal "for combat services...."

"Have you, esteemed soldier, by any chance heard anything about our village, Darvishan? People have said that the mujahidin have wiped it off the face of the earth," (Khodzhiddin) asked cautiously.

"What do you mean, old man? It is a brave village: It can stand up for itself!"

Pleasure lit the old man's weather-beaten face: he knew the character of his fellow villagers. At that point, strictly observing all the oriental formalities in speaking with elderly strangers, I added to what the nomad turned border guard had said.

Alarming news arrived shortly before dawn from the village of Darvishan, truly one of the most militant villages in Helmand province: "A large group of Dushmans is attempting to capture the village. Ammunition is running out."

...The bright edge of the sun's disk suddenly appeared above the sand dunes of Rigestan desert. Its rays dispersed the darkness surrounding the thick eucalyptus grove, the gardens, the cotton fields, the village enclosed by a high earth rampart, and the people on it, changing and lengthening their shadows. And thus all the inhabitants who had fled to their home-made fortress looked like heroes of oriental legends who have just defeated an evil force. Joyful and excited after a difficult night without a moment's rest, it seemed that it was not only us that they were welcoming. They were welcoming their sun, their new day, their life which they had defended in the difficult duel....

Darvishan is situated at the center of the Helmand valley. People's rule was established there immediately after the April revolution. A school, a medical station, a cooperative, a party committee, a women's council.... All these were set up for the first time. The village was also one of the first to stand like a strong fortress across the path of the Dushman gangs. And it is standing to this day. This is also why the bandits try to capture the village--at any price.

...On that day, over 600 Dushmans from the gangs of (Bozmakhammad), (Turan Vali), Abdul Khakim), and (Manlavi Makhmadshakh) joined battle against 85 people's militia soldiers and 110 fighters from the detachment for the defense of the revolution. But those figures are notional--all 400 residents rose as one in defense of Darvishan.

The artillery bombardment began at midnight. Fire from mortars, grenade launchers, rockets.... The population took cover behind the walls of the fortress, which had been erected by the entire village. And when the Dushmans launched the attack, they were met by a hail of fire. (Vatana), whose husband had died in battle against the gang, also led out her detachment. Fifty-seven women picked up the rifles of their dead husbands and fathers. The children took up positions next to them, and the older ones were also armed.

Things in that battle were not easy for senior lieutenant (Shalo), commander of a Sarandoy company. He knew that the Dushmans would fight fiercely, desperately. He also knew that his own brother, who had never understood anything in his life, would be among the enemies shooting at him.... (Shalo)

was engrossed in the battle, and it was only at dawn that he was distracted by a new, chattering noise above the sound of battle: a helicopter! People were hastening to help them....

The battle died down. The Dushmans departed without capturing the fortress, they departed leaving their dead behind.

...To my great surprise, tears appeared in my interlocutor's eyes. Tears of joy, tears of pride in his village:

"Yes, yes, mister, that's how people are at home, in Darvishan."

"And is it long since you visited our part of the world, sahib? How are things there now?"--the gray-bearded (Khodzhiddin) asked, hoping to hear some more.

What could I tell him about the province? Much. About the villagers who this year picked almost 18,000 metric tons of cotton. About the excellent work being done by his fellow villagers at the ("Khadzhari-Nadzhari") factory, producing furniture and souvenirs from the famous (Doshi) mountain marble. For the new school year the factory collective presented the province's schools with desks, chairs, and other furniture worth a total of 154,000 afghanis, and now one-half of the school pupils are not longer sitting on the floor to study.

I also told him about the villagers who, together with specialists from the Helmand irrigation system administration, cleared dozens of kilometers of canals. And although the Dushmans now and then mine the roads and destroy the canals, the water is flowing in most districts.

"And do you remember the state stock unit, old man?"

"You mean the one where the livestock were stolen and the buildings burned down? It was right after that that I set out for the other side. Cursed be that day!"

Then, when the livestock had been driven away in the early spring, all the workers gathered at the stock unit early the next morning. They had no idea where to begin. They gathered the cows that had been left in the yards, bought some more calves, and sowed the meadows. Now they produce 200 kg of milk a day. It is sold primarily to families with many children and supplied free to those whose breadwinners have died defending their revolution.

The old man and I spoke of many other things. He asked how much a calf costs, and what he had to do to join the collective, and would his sons be able to study at the school....

Suddenly the bus arrived, and it was time for us to be on our way. "Tell me something more, please!"--(Khodzhiddin) asked.

"They've expanded the airport at Lashkar Gah, and now big aircraft are landing in your part of the world. They've opened a camp for your children, old man. Not like the ones in Pakistan, where you spent 3 years. In these young pioneer camps the children rest, learn and eat for free."

"Tell me more!"

"In a month's time you will definitely receive a document entitling you to own land. Your own land, father. And don't tarry on the way: your land is waiting, it is time to think of the harvest...."

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